CANADIAN HOME ECONOMICS JOURNAL

published by CANADIAN HOME ECONOMICS ASSOCIATION

July 1969 – Volume 19 – No. 3

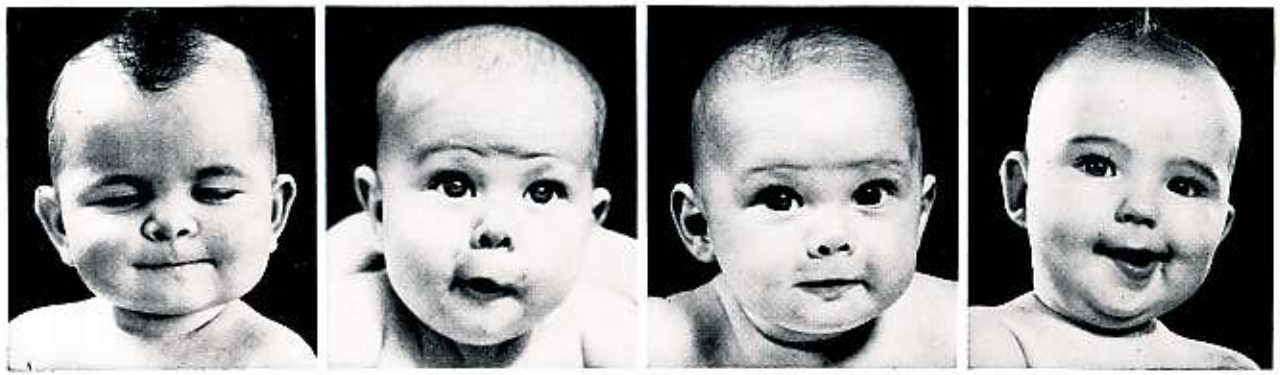
– Food Services as Related to Social Groups

– The Future of Food

– Direction of Home Economics in Canada

– Biology the Ultimate Science

– Federal Dept. of Consumer & Corporate Affairs



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CANADIAN HOME ECONOMICS

JOURNAL

July, 1969 Volume 19, No. 3

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Subscription rates: $4.00 per year or $1.00 per single copy.

Application for membership in the Association should be sent to National Office. Membership fee is $15.00 due May 1st.

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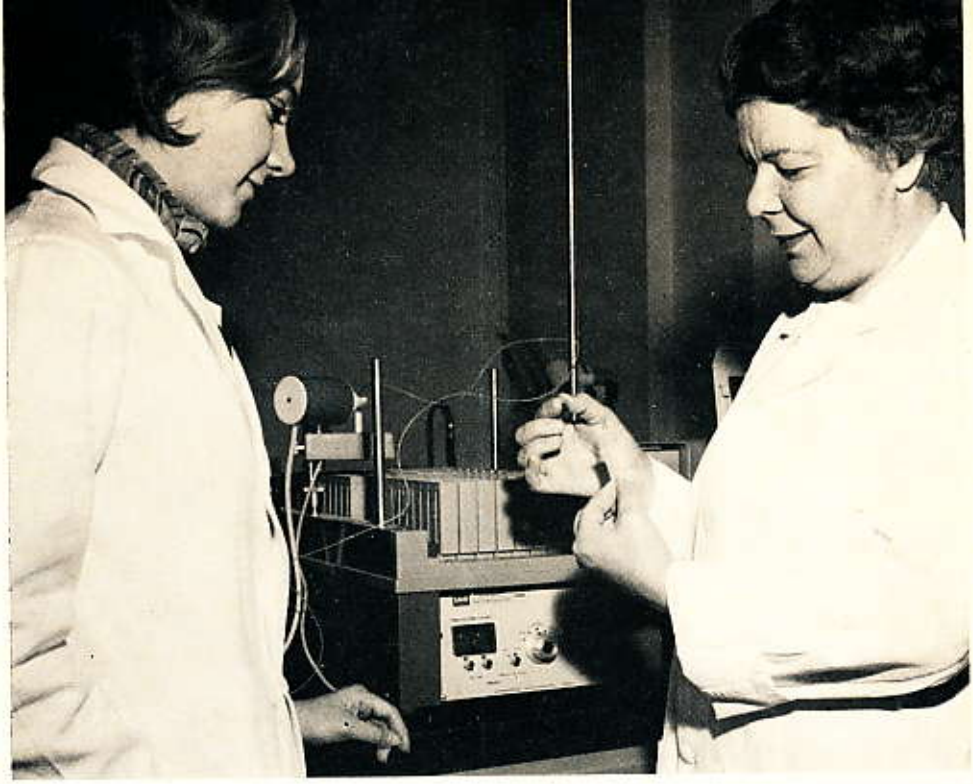
Published Quarterly by
Canadian Home Economics Association

Printed by
Southam • Murray, Box 510, Weston, Ontario.

Authorized as second-class mail, Post Office Department, Ottawa, and for payment of postage in cash.



L'AVANCEMENT DE LA VIE UNIVERSITAIRE

Cette image montre Mlle Mariette Blais et une étudiante, Jocelyne Savard, de l'Université de Montréal au travail dans un laboratorie. Il est très apropos que nous l'utilisions, à cette époque, où plusieurs diplômés contemplent des études supérieures.

Notre association encourage des études post-graduées au niveau de la maîtrise et du doctorat dans nos universités canadiennes. C'est la raison pour laquelle nous avons commencé notre campagne pour les fonds de bourses d'études il y a déjà quelques années. Notre but est d'avoir assez d'argent en 1970, mais nous avons besoin de l'aide de tous nos membres pour atteindre notre objectif. Si nous y réussissons, nous aurons deux bourses à offrir chaque année.

L'augmentation du nombre d'étudiants qui suivent les cours avancés bénéficie à notre profession aussi bien que les étudiants. Leurs recherches ajoutent à notre connaissance et ce fait nous aidera, peut-être, à résoudre quelques problèmes de la société. A cause de cela, nous voulons encourager tous ceux qui ont la chance de considérer sérieusement des études avancées.

Bonnes vacances à tous et bon repos!

To my mind, it is only fitting that a message appearing under a picture of Miss Mariette Blais and a student, Jocelyne Savard, taken in one of the laboratories at the University of Montreal, be bilingual. The photograph brings to mind that this is the time of year when many graduates contemplate further study.

Our association, to encourage master's and doctoral programs at Canadian universities, commenced a Scholarship Fund, some years ago. Our aim is to have sufficient funds by 1970, to award two scholarships yearly for advanced study. To succeed we need the support of every member.

Post-graduate study benefits the student and advances our profession. The research might even help solve some of the problems of today's complex society. May we therefore urge all who have the opportunity, to seriously consider advanced study.

Happy holidays to everyone!

Sally Henry

Food Services As Related To Social Groups

HELEN C. ABELL, *PhD*
Professor of Sociology, Dept. of Geography and Planning, University of Waterloo, Waterloo, Ont.

If sociology is understood to encompass the scientific study of people in group relationships then we need a common understanding of the term "social group". One clear definition has been put forward by an American sociologist Scott A. Greer. Greer's definition is this: "A social group is an aggregate of individuals who exist in a state of functional interdependence from which evolves a flow of communication and a consequent ordering of behaviour".(1)

Three conditions are stressed in this definition. First is that of functional interdependence, or team work. This may be identified as a situation in which change in any part of the system results in change to the other parts of the same system. In other terms it means that individual persons, men and/or women, are dependent on one another and that all are dependent on the group as a means of fulfilling certain needs. This I think would give us the idea of what we mean by the term "functional interdependence". The second aspect of a social group which causes it to become an entity is the two way flow of communication. If we consider a group as a certain set of relations between individual members we realize that these relations are created, defined and reinforced by the flow of communication through this group. A continuous process of communication is essential to a group's existence. Thus, when we have functional interdependence of a given aggregate of individuals which gives rise to a flow of communication, we see sanctions resulting, and it is these sanctions which order the group's behaviour. When these three conditions are met then, functional interdependence, the flow of communications and the ordering of behaviour, we do indeed have an on-going social group. When any of these three necessary conditions are not met the group either is in trouble or ceases to exist. Thus, this particular gathering of Home Economists from all over the world for the purposes of this Congress (and I hope far beyond the confines of this Congress) can be considered as a social group insofar as these three conditions are met.

Considering that the theme of this Congress is *Home Economics in the Service of International Co-Operation*, I think you will understand why I have stressed a common understanding of the very important definition of what we mean by a "Social Group". My reasons for stressing this is that the original suggested title of the particular paper which I was asked to present, explicitly or implicitly mentions social group three times.(2) Thus when we consider community life we are talking about a certain type of social group characterized by a defined territory within which social interaction occurs. When we talk about group feeding, a collectivity of persons is implicit. The concept "mixed ethnic group" draws attention to a collectivity of persons with differing countries of origin which means differing cultures involving differences in food habits, language, attitudes, behaviour, use of artifacts and all of the other attributes of ethnic differences.

When a Home Economist goes from her country to another country and serves, as many of this group have, as a "technical expert abroad" especially those of us who come from the so-called "developed" countries to work in the "emerging" nations, we and everything about us represent the group behaviour which is part of our own culture. Very rarely are we aware of the culture of the social groups with whom we will be working when we leave our native land.(3) My point here is that unless we have an appreciation of the need to understand what creates a social group, no matter where in the world it is found, we run the risk of being totally ineffective in our work, be-

Prepared for International Congress on Home Economics, XI Congress, Bristol, England, July 1968.
Conference Theme: Home Economics in the Service of International Co-Operation.
Plenary Session I—International Co-Operation at the Sociological Level.
Sub-Plenary Session Group I—Catering, Institutional Management and Dietetics.
A. Sociological—The social advantages of institutional life and group feeding for mixed ethnic groups.

cause we will be unable to help in the reordering of behaviour which is usually why a technical expert goes abroad. Despite the fact that over the last 10 to 20 years an increasing number of home economists have left their own countries to serve abroad on temporary assignments it is fairly recently that any member of home economists in their own countries have become increasingly concerned with the need to consider the vast number of immigrants who have flooded into many of the countries represented at this Congress. People who have come from different nations, people of different ethnic groups, have certainly come in vast numbers to this particular country in which the Congess is being held, as they have over the years to my country of Canada, to the United States, and throughout the Common Market Area. As we know, there has been a tremendous increase in the mobility of the work force within Europe. This increased mobility of population between different nations makes it particularly relevant at a Congress of this nature where we are talking about international co-operation, that we must direct more attention to these matters of catering, institutional management and dietetics where we must consider institutional life and group feeding for mixed ethnic groups. Because we know that in this flow of population many people for one reason or another are not immediately able to set up other small nuclear families or extended family groups to take care of their own living arrangements as they originally did before moving to another nation. The type of population flow that I have been describing is largely voluntary. This, of course, is only one side of the coin. There are a vast number of people who involuntarily are institutionalized. This, of course, would include such people as those in hospitals, those in permanent homes for the aged, or the people who offend society and end up in jails or reform institutions, the children who are orphaned, refugees, the aged, ad infinitum.

Regardless of whether the individual voluntarily or involuntarily is removed from his habitual place and mode of behaviour, from his friends and from his associates, he or she faces the same sort of problem of fitting into a new social group — a group which may be extremely heterogeneous despite the individual's usual desire to be a part of a relatively homogeneous group. Rather than expect these people to accept and adjust to completely foreign foods and food habits especially in an institutional setting, attention needs to be directed to decentralizing institutional feeding arrangements permitting the service of familiar foods to homogeneous ethnic or cultural groups particularly in stress situations such as refugee camps.

The tremendous importance of food not only as essential nourishment but its psychological importance comes to the fore in these stress situations. The problems, of course, are compounded when the new people coming together in some form of common or community living in institutions have differences, in terms of language, religion, ethnic origin, age, sex, and all of the other human variables that could be named. Despite this cataloguing of possible problems there is a very positive element which could be pointed out and that is the flexibility of the human being. It is well known that there are people who after having lived and/or worked in an institutional setting for varying periods of time do reach a stage where even if given the opportunity, they do not wish to leave this particular form of human organization. One of the reasons I may suggest is that they have become a part of a meaningful social group—a social group in which the elements of functional interdependence, communication flow, and the ordering of behaviour are present.

What are some of the factors that home economists need to take into account if they wish this existence of a meaningful social group to be a positive factor in the institutions in which they are responsible for the feeding of people? Primarily would be a consideration of the purpose or goal of the institution or organization in which the home economist is employed or serving. As an example, let us consider a hospital situation. Here your home economist would be a person with specialized training in dietetics entitling her to the status of dietitian. This status makes the rest of us expect her to perform the role of a person thoroughly familiar with the relationship between food and health and thus able to compute and to see that adequate diets are served as prescribed to selected patients. If the dietitian conceives of herself (her role

expectation) as the sole person with specialized knowledge and authority—with a large desk (symbolic social barrier) between herself and the kitchen staff responsible for the actual preparation and service of the food—and if the dietitian has little personal contact with the medical and nursing staff and no personal contact with the patients—one could automatically predict a problem situation. This type of situation is indeed a problem in which, because of a lack of two way communication throughout the whole hospital situation (or hospital social system) a great deal of distress and discomfort voiced by the patients focusses upon food as the target sometimes justly and sometimes without justification. Nevertheless the dietitian may be unaware of the influence her behaviour has on the morale as well as the physical well-being of the patients. In a hospital situation where the dietitian is cognizant of the need of functional interdependence involving not only herself, but her staff, the nursing staff and the patients, she makes it her responsibility to promote a two-way flow of communication. With this condition met it is much more probable that the desired ordering of behaviour will result because the common goal and purpose of the institution will be better understood and achieved.

Another example could be drawn from military life. In a highly structure bureaucratic form of social organization such as is found in military establishments, the home economists who might be serving as a Messing or Catering Officer usually has a clearly defined status as an officer and a clearly defined role to play. Her role is that of seeing that meals are provided at regular hours to large numbers of people who must be kept in good health. There is little reason to doubt the existence of functional interdependence in a military situation—this of course is the basis for the whole organization. However, the matter of communication as necessary to the formation of a meaningful social group frequently leaves much to be desired.

If I may draw on personal experience, let me mention that during the Second World War I had the responsibility of running a School of Cookery and of serving as a Messing Officer in both C.W.A.C. (Canadian Women's Army Corps) camps and in an A.T.S. camp here in England. The Canadian situation was one in which although predominantly women, some men were posted as members of the establishment. In terms of ethnic origin, the group was chiefly English speaking but did include people of French-Canadian origin as well as a diversity in terms of religious affiliations and economic backgrounds typical of the subcultures within Canada. Under wartime conditions there was a standard daily ration which allowed relatively little variety but did permit the serving of foods which were I trust, well cooked and properly served. Despite this a great many complaints, which seemed to us to be groundless, were directed at the meals. This problem was solved by the creation of group consciousness applying the principles of information sharing and group involvement. Remedial action was taken by having representatives from the various military ranks sit together on a committee once every week during which the menu was planned by the group as a whole in consultation with the Messing and Catering staff. This meant that the several representatives of the privates were able to explain to all of the privates exactly what foods were on the weekly menu, why they were included, and why it was not possible to serve the wide variety of familiar dishes that people from different parts of the country, different ethnic origins, etc. felt they should have. The same reasoning, of course, applied to the non-commissioned officer group and to the officers as a group. This seemingly simple technique did solve problems for the whole Messing and Catering staff. What is meant was that the principle of group formation was being applied. A two-way flow of communication was established, functional interdependence was present and the ordering of behaviour automatically followed. By this I mean that all of the people concerned not only knew what was being done but they influenced, insofar as was possible, several ways in which the situation could be improved. Above all, they understood why certain things were possible and why certain things were not possible. This in turn contributed to group solidarity.

The principle of group involvement implicit in the illustration which has just been cited has application in any similar setting in which large numbers of "captive people" are involved. If the aim is to create a true social group in the sense which has been

outlined, then it is obvious that this matter of involvement is very necessarily a part of the communication process. The application can be made in many facets of institutional life and feeding. I see no reason why it cannot be utilized in institutions of many kinds where the residents are not very young children or mentally incapacitated adults regardless of the sex and/or ethnic origin, language, or religion of the institutional inmates. I think it has particular application for schools. These are the sorts of institutions where they have a relatively permanent population for varying periods of time.

Of course, this example of involvement does not have the same application in those commercial catering establishments such as restaurants and canteens where the itinerent public has free choice of where it will go, with its patronage. The sociological implication in this situation is that of creating a meaningful so-called small "primary" social group amongst the employees within the establishment. Good food, good service, and moderate prices could be expected to have a paramount role to play in attracting and holding patronage.

In preparing myself for this meeting I spent some time visiting the office and work place of one of the senior men responsible for feeding several thousand university students in one of our Canadian universities. One of the first questions I posed was, "Do you employ any dietitians or home economists?" My informant prompty replied "Oh heavens no, we couldn't use *them*". I, of course, enquired why? His answer came without hesitation, "They just can't work with the staff, especially with the men". On probing it was found that this man's experience in having worked with professionally trained home economists and dietitians had been almost entirely a disastrous experience. Disastrous in the sense that of all of the professionally trained home economists and dietitians with whom he had been associated over a period of some 23 years, practically all felt that they and they alone knew all of the answers! There had been no attempt to learn from the men who were in the roles of chef or in any one of the other dozen jobs that are entailed in large scale food service operations. There had been no two-way flow of communication. This was evidently deeply resented by my informant who at the point of time when I interviewed him was responsible for the hiring and firing of some 174 catering establishment personnel.

Regardless of how you and I as individuals may bristle at the attitudes expressed by a person such as this gentleman, nevertheless the message seems to be very clear. When you or I or any other women with training in home economics or dietetics gets into a position where we are members of a large group of people we must consciously create team spirit or true functional interdependence that is inescapably bound to communication. This involves listening and learning from other persons, regardless of differing educational levels, regardless of differing ethnic origins, regardless of all the things that divide us.

Another question I posed to this particular informant was this matter of how in an institution of some 8,000 adults, several hundred of whom come from Asia and Africa to join our normal flow of Canadian students, how is the matter of the feeding of these particular people handled? Do we in effect cater to their particular desires and wishes? The answer of course was no! However, on probing it was discovered that a few dishes which had not been on the typical Canadian institutional menu a few short years ago are now appearing quite regularly. The fact that the senior chef in this particular establishment happens to be Hungarian led to the serving of at least 3 Hungarian dishes which I was told are now favourites of the primarily Canadian student body. The fact that rice is an important ingredient in these particular Hungarian dishes makes them acceptable to the Asian and African students.

Unfortunately there is evidence that some Asian and African students experience very real difficulties in adjusting to North American diets. Most university medical personnel are able to relate examples of malnutrition in the midst of plenty where a foreign student may develop anaemia or other deficiency diseases through his inability to select and/or consume the typical offering of meat, potatoes, vegetables and sweet dessert pattern of North American institutional dinners.

The trend to sharing an apartment or housekeeping rooms off-campus by 2 or 3 or even more graduate students from abroad is frequently based on the desire to perpetuate their own food habits rather

than struggle with the habitual foods consumed by nationals of the host country.

One of the very real problems in institutional feeding is that the demands of so-called efficiency outweigh any consideration the dietitian, or the home economist may have in terms of nutritive value, flavour, colour, texture, and the many other factors which we consider to be important. I speak with feeling about such things as coffee which one purchases from a machine from which someone else might have purchased hot chocolate five seconds before. The flavour that comes out is best left undescribed! One of the prices one pays for living in a so-called affluent technological society is that we turn over many of the responsibilities for such things as group catering to commercial establishments who of course, must make a profit to stay in business. As long as people buy the mass produced depersonalized food or beverage especially when there is no alternative choice conveniently located, the machine's owner can literally get away with anything.

In the economically developed countries of the world where industrialization and urbanization have brought higher material levels of living and increasing life expectancies there has also been an increase in the breakdown of former community and kinship groups resulting in new social problems.

Many functions formerly performed within the home or within the community are now considered to be a public responsibility. Hence the demand for more and more hospitals, homes for the aged, homes for the mentally retarded, etc. It is apparent that in many of these institutions particularly when people of differing ethnic origins are confined for long periods new human problems are emerging. Problems of alienation leading to both mental and physical disability of far too many patients and/or inmates are clearly associated with many types of public institutions.

According to the Director of the Home Care Programme in one of our Canadian cities, one of the major factors contributing to this alienation experienced by persons of non-Canadian ethnic origin is the inability of hospitals to serve the foods famliar to these people.

To help alleviate this type of problem as well as that of relieving pressures on available bed and/or room space some hospitals, mental institutions and homes for the aged are undertaking programmes to return their patients or clientele to family group situations. Provision is made for visiting nursing care and/or visiting homemakers and/or visiting physiotherapists.(4) Recovery rates of former hospital patients have been increased by this programme an estimated 30 days for such long-term illnesses as strokes, fractures and certain types of surgery.(5)

A final aspect of this matter of food service to social groups relates to the "Meals-On-Wheels" programme which originated in England and is now under way in many other countries including Canada.

Obvious advantages of this provision of hot, adequate meals to individual, lonely, aged persons in their own homes, rooming houses or other housing are those related to nutrition and to the pleasure of receiving a friendly regular visitor (usually a volunteer) delivering the actual meal.

Another advantage which may not be as obvious to the recipient of the "Meals-On-Wheels" is the satisfaction and sense of group belonging accruing to the volunteer worker who is an integral part of a meaningful social group organized for humanitarian purposes.

In summary then, may I point out that it would have been impossible in the time available for me to have attempted an adequate sociological survey of the various types of establishments in my own or any other country that provide food for large numbers of people. I have attempted to point out some of the principles that lie behind the formation of a social group. And by example, to show that when a meaningful social group is created in any sort of a mass-feeding situation benefits accrue. These benefits are not only confined to the home economist or dietitian professionally involved but to the whole work force of which she is a part. Ideally benefits accrue to the larger social system where the recipient of the food as well as the group concerned with the preparation and serving of food, have common goals and in reaching for these goals benefit from the social interaction involved. Benefits can clearly be seen in terms of the social product which in this case we can define as the actual food itself. Benefits are just as apparent in the social process. This social process encom-

Continued on page 14

Who's Who In Home Economics

Mrs. Ronald Peck
B.Sc. (Home Economics)

Our Canadian Home Economics Association Director for Nova Scotia, Jean Peck, née Rand, was born and educated in this province. After attending public schools in Woodville and Kentville, she went to Acadia University, Wolfville, where she graduated with a Bachelor of Science degree in Home Economics. Interest in teaching took her to Teachers' College, Truro, to study for a general teaching diploma.

Jean Peck has had experience in teaching academic subjects and Home Economics in elementary schools, as well as Home Economics at the university level. She is presently on the Home Economics faculty of Acadia University.

Mrs. Peck has served as a member of both the Nominating and the Education Committees of the Canadian Home Economics Association. She has completed a term of office recently as the President of the Nova Scotia Home Economics Association. With these experiences at both the national and the provincial levels, she has come to the conclusion that, "strong, active affiliated groups will do much to strengthen and build our national organization."

Our Nova Scotia Director, with her architect husband, and their two boys aged 19 and 21, takes an active part in the community life of Wolfville as well as in Acadia University affairs. Jean Peck's other interests include the University Women's Club, reading, sewing, entertaining and travel.

Miss Grace Porterfield
B.H.Sc.

Miss Grace Porterfield, the Ontario Director of the Canadian Home Economics Association, was born in Listowel, Ontario, and she attended primary and secondary schools in this district.

After studying Home Economics at Macdonald Institute, Guelph, and graduating with a Bachelor of Household Science degree, Miss Porterfield attended the College of Education, University of Toronto and from this institution she was granted a High School Assistant, Type A., Home Economics Certificate.

Grace Porterfield is making teaching her career and she has had already considerable experience in this branch of Home Economics. She has held positions in the High School of Prince Edward Collegiate, Picton and in the North District Secondary School of Barrie. She was Master at Teachers' College in Ottawa and London, and presently is Associate Professor at Althouse College of Education, University of Western Ontario. Miss Porterfield worked for two years on Curriculum Revision with the Ontario Department of Education.

In addition to a busy professional program, Grace Porterfield has found time to take an active part in provincial and local education associations, in Home Economics and service groups, as well as in the Macdonald Alumnae. She thus brings to her present responsibility as a C.H.E.A. Di-

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The Future of Food

by Dr. John Owen, *M.B., Ch.B., D.P.H.(Birm.), Dip. H. Ed.(Lond.)*
Associate Professor
Department of Social & Preventive Medicine
University of Saskatchewan

Ours is a hungry world! Home economists, particularly those who have worked in developing countries, are well aware of this.

What Are the Facts?

Ten to fifteen percent of the world's population have insufficient food; a further thirty percent or more are malnourished because of a lack of protein or other essential dietary constituent. Figure 1 shows the parts of the world where protein-calorie deficiency is prevalent; these are essentially the developing countries of Asia, Africa, and Latin America.

Demographic forecasts predict a world population of 6.6 billions by 2000 A.D., that is twice the present population. This poses an important question. How can the resources of the land and sea be utilized not only to serve mankind's present needs but also those created by the population explosion?

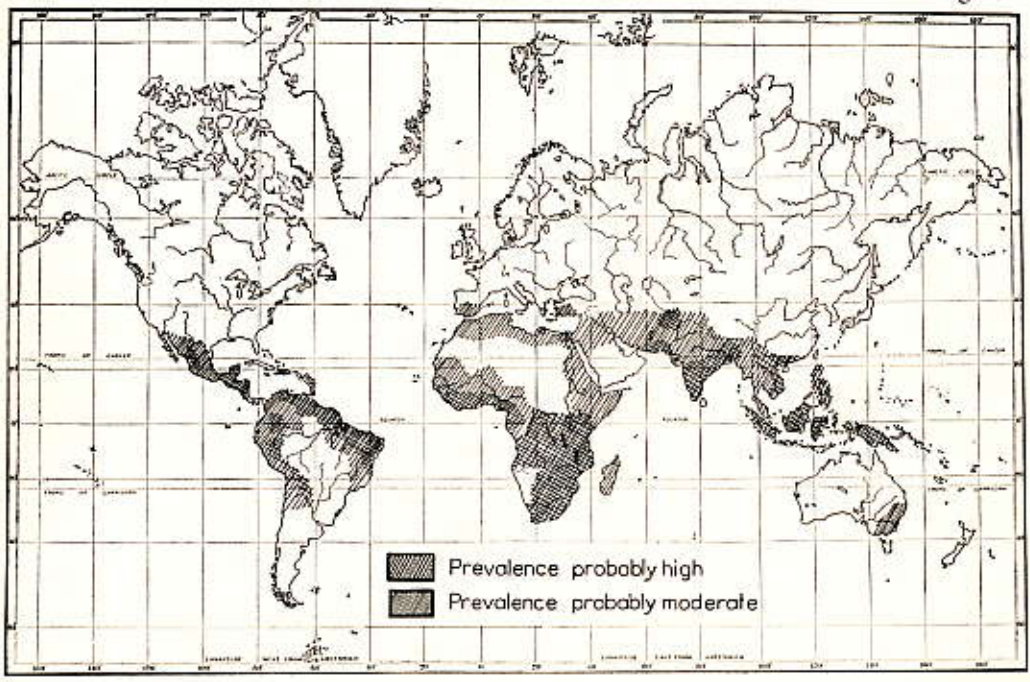
Recent Developments

Thanks to geneticists and plant breeding specialists, the annual yields of staples such as rice, corn, and wheat have been significantly increased. Chemical fertilizers hitherto unacceptable, are gradually being pur-

*An abbreviated version of a paper presented at the Canadian Home Economics Biennial Convention held at Regina, June 2-5, 1968. The full text may be obtained from the author at the following address: Department of Social and Preventive Medicine, U. of S.

GEOGRAPHICAL DISTRIBUTION OF PROTEIN-CALORIE DEFICIENCIES IN YOUNG CHILDREN

Figure 1

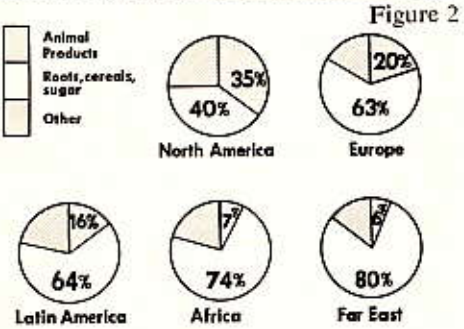


chased by farmers in India and similar countries and, used in conjunction with high yielding dwarf strains of rice and wheat, will soon make South-East Asia self-sufficient in cereals. The end of starvation for these people is, therefore, in sight.

Unfortunately, protein malnutrition is not capable of such easy or immediate solution. Figure 2 shows how small a part animal products play in the diets of people in Africa and the Far East. Standards of animal health in these countries are low and annual losses can be as high as 50 percent. Some progress has been made in the control of epizootics such as rinderpest (cattle plague) although heavy losses occur from the less spectacular enzootic diseases such as tuberculosis, the brucelloses (undulant and abortus fevers) and parasitic infections. Figure 3 shows the distribution of the world's major epizootic livestock diseases.

CALORIES DERIVED FROM MAJOR FOODSTUFFS

Figure 2



The similarity of this distribution to that of protein-calorie malnutrition (Figure 1) is striking.

A way of providing temporary relief of protein shortage in developing countries is to supplement the diet with vegetable protein in concentrated form. For example, INCAPARINA, developed in Guatemala, utilizes defatted cotton seed, soya bean and corn.

Immediate Goals

Recent agricultural and food processing developments help to brighten the gloomy picture of inadequate world food resources. What remains to be accomplished?

The farmer, the primary agricultural producer, needs assistance in developing economic farming methods. The hoe must give way to the plough which, in its turn must give way to the tractor. These changes require capital and there is an urgent need for government loans to farmers to purchase equipment.

Other important areas requiring attention are improved marketing facilities, better communications and the development of organizations such as co-operatives to assist the farmer in transporting his produce and eliminate the middleman who invariably benefits at the expense of the farmer.

Alongside these developments is the necessity to educate the farmer how to improve his land and safeguard his crops. To be effective, this teaching should be given on-the-spot and, in some cases, must seek to reform the land tenure system which, so often, is inimical to improved patterns of farming.

Hope for the Future

Are future developments in the fields of education, agriculture, engineering and other branches of technology likely to contribute to the solution of feeding the world's billions? Some promising ones are outlined.

Mobilising Land Resources

Less than one tenth of the earth's land surface is used for cultivation. Considerable areas consist of mountains and desert which cannot support food crops or animals: other areas experience poor soil and climatic conditions and it is uneconomical to bring them under cultivation. This leaves about one fifth of the earth's land surface suitable for agricultural development.

Britain, during the height of the second world war, found that, by employing modern farm machinery and fertilizers, large areas of marginal farming land could be brought into production. There are cogent reasons for believing that considerable tracts of land on either side of the equator could be utilized. In other areas with limited rainfall, the building of dams can provide irrigation for the parched earth and enable it to sustain crops. Moreover, in addition to producing hydroelectric power, the lakes created above the dam site become valuable fishing grounds. Increasing the water supply in many tropical countries will enable farmers to harvest year round crops instead of having to rely on a single crop watered by seasonal rains. In this way, annual food production can easily be doubled or even tripled.

MAJOR EPIZOOTIC LIVESTOCK DISEASES
(excluding foot and mouth disease controlled areas)

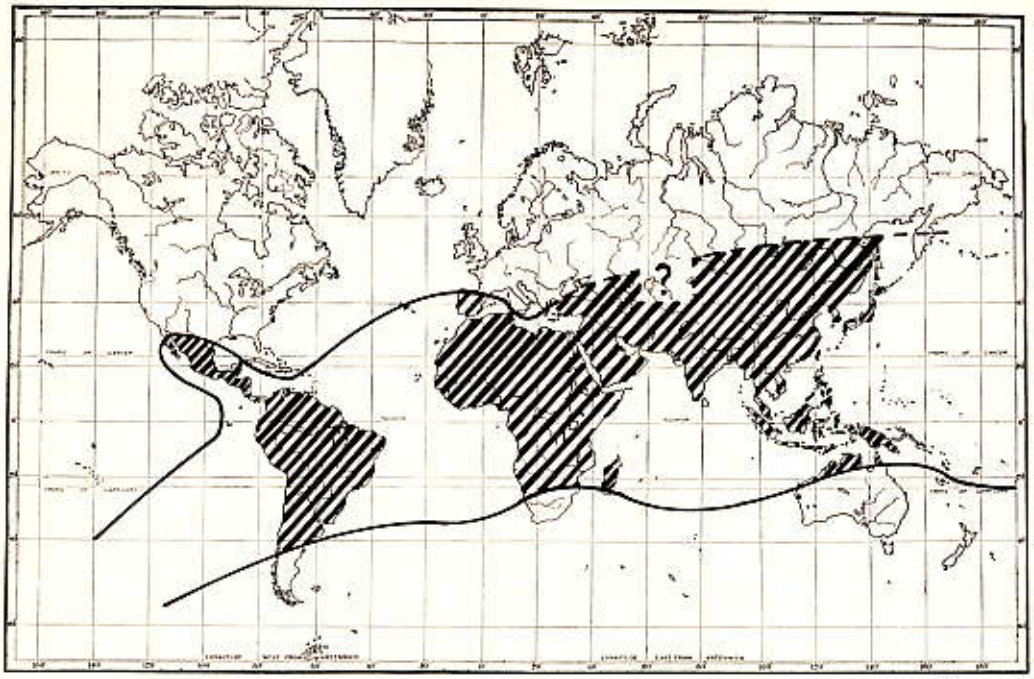


Figure 3

Major irrigation schemes, unfortunately, require huge capital outlays, well beyond the resources of those countries which are likely to reap most benefit from them. Financing these schemes is a service which the rich developed countries can give to the less developed ones. The World Bank and some governments are already helping to finance these major engineering developments but much more support needs to be given by the rich countries to the poor ones. Both share a responsibility for ensuring that the earth's resources are developed to the best advantage.

Tapping the Resources of the Sea

Although three quarters of the earth's surface is covered by the oceans and inland seas, only one percent of our food is drawn from them. Many of these waters nourish large quantities of fish—valuable sources of protein, which are not being utilized. Contrary to earlier beliefs, it is now established that some of the world's best fishing grounds lie in the equatorial belt. A rich harvest awaits those countries able to equip themselves with vessels and fishermen capable of operating outside coastal waters. Although fishing is a traditional occupation of coast dwellers of the African and Asian continents, it is usually carried out in the lagoons, creeks and shallow waters, and catches are small. Capital is needed to develop national fishing industries. This is another instance where the rich countries can help the poorer ones.

A less costly undertaking than deep sea fishing is the development of inland fish farming. Fish ponds have been a traditional source of animal protein amongst certain Asian peoples for many centuries. Their introduction to other continents, particularly Africa, could be achieved with little capital outlay. Moreover, the returns from fish farming in terms of cash and food value, far exceed those from cereal and root crops.

Nations such as the Japanese, harvest certain species of marine algae and use them as food. Suggestions have been put forward that greater use should be made of this highly proteinaceous form of plant

life and also of the unicellular animal and vegetable forms of plankton in human nutrition. Large-scale harvesting is a major problem but current research is focusing on the feeding of livestock on algae nourished by sewage effluents. Man, for obvious reasons, may be disinclined to consume algae grown under these conditions!

Food Irradiation

Annual world food losses due to poor storage have been estimated at 30 percent —a tremendous and unnecessary waste of resources. Foodstuffs are damaged by excessive heat and moisture and by a variety of biological agents, notably insects and fungi.

Poor communications, unstable markets and apathy of farmers contribute to storage losses. There are many links in the chain between the primary producer and the consumer. All require strengthening. Are there any short cuts?

It has been found that exposure of cereals to small doses of high energy radiation such as that produced by cobalt 60 kills or sterilizes insects. Slightly higher doses increase the keeping properties of fruit and fish, enabling these perishable commodities to be transported and marketed thousands of miles from their harvesting grounds. No discernible effect on food has been produced by such exposures and animals fed on irradiated food over a two year period have remained healthy: neither have defects been observed in their offspring.

Twenty-five governments have programs in food irradiation and there is every possibility of this technique being applied to controlling food storage losses in developing countries where the problem is so acute.

Protein from Hydrocarbons

Experiments have been going on for a decade to assess the practicability of using hydrocarbons associated with the petroleum industry as a basis for fermentation processes by yeasts and bacteria in the production of protein. British Petroleum, one of the pioneers in this field, is setting up in France a plant to produce protein from the microbiological dewaxing of gas oil. Three processes are involved in this operation. In the first stage, yeast microorganisms in a nutritive medium consisting of oxygen, nitrogen and mineral salts are mixed with gas oil in a fermentation chamber. Feeding on the waxy hydrocarbons in the gas oil, these microorganisms multiply rapidly and produce a yeast cream which is harvested during the second stage by centrifugation. The third stage is essentially a purification one during which any gas oil remaining after centrifugation is removed by a special solvent process. The resulting protein product, a yellow odourless powder, will be used in animal feeds initially, but there are good grounds for believing that it can be modified for human consumption. Protein obtained in this way costs about 35 cents per pound and compares favourably in price with dried skim milk, the standard protein food supplement. From the manufacturer's point of view, this method of producing protein is a simple one and does not require expensive plant. Also the elements required for microbiological reproduction are cheap and easily obtainable; nitrogen is supplied by ammonia, oxygen from the air and sulphur, phosphorus and magnesium from inexpensive salts. Another economic advantage is gained by the use of waxy hydrocarbons, the least profitable fraction of crude oil, which have to be removed in any case in the production of petroleum spirit.

British Petroleum is not alone in this field. Several other major oil companies are at the testing stage in their search for the best feedstocks. It is likely that a variety of liquid hydrocarbons and natural gas will be used for the manufacture of protein and any country possessing a refinery should, theoretically, be able to produce the material.

Fundamental Education

The need to educate farmers how to apply modern scientific knowledge to their own farming situation was stressed as one of the Immediate Goals. Longterm improvements will only be assured, however, when the burden of illiteracy has been lifted from the people of developing countries. The citizens of these countries will then have the possibility of communicating with a wider world than their own family, village or tribe. Knowledge of the development of food resources in other countries can be a valuable stimulus to introducing new practices to their own communities.

Unhappily, this emphasis on fundamental education can lead to a vicious circle. Starving people are unlikely to heed the call of education: their prime aim is to fill their empty stomachs. Yet these stomachs will remain unsatisfied unless, through education, the people are encouraged to learn how to improve their lot.

Stabilization of Populations

It is ironical that the countries, in particular, those of Europe and North America, which show only small increases in population, are the ones most able to produce or import larger quantities of food to sustain these increases. It is equally ironical that, although agricultural production all over the world for the last 25 years has increased more rapidly than population, this increase has been most pronounced in the developed countries. The resulting effect has been to make these countries richer and better fed whilst many developing countries have become poorer and more undernourished.

Vigorous attempts are being made to limit population growth particularly in India and Pakistan and, to some extent, in African countries. It is too early to assess the results of these family planning programs and, in any case, significant benefits will not be apparent for several decades.

In the meantime, although the world population in A.D. 2000 has been estimated at twice its present size, demographic projections are notoriously inaccurate. Also, various economic and social factors may come into play before the end of the century and significantly alter population trends.

Historical Perspective

This survey of the future of food has indicated how easy it is to despair of a practical solution to the problem of feeding the present world population and generations unborn. And yet there is plenty of evidence to show that immense strides have been made during the last twenty years in improving the supply of food. Immediate goals can be attained providing rich countries come to the aid of poor ones. Taking a long-term view, the development of hitherto untapped food resources with the aid of modern science and technology, gives ground for optimism.

Should we not also refer to history and ask ourselves if the situation in developing countries today is any worse than the condition in Europe in the early eighteenth century? How could people of that age afflicted by poverty, plague and pestilence, possibly know that they stood on the threshold of the Industrial Revolution—a revolution which, although unpleasant for those involved in it, nevertheless presaged man's increasing mastery over his environment. We, in Canada, are beneficiaries of this tremendous upsurge of creative thinking and engineering activity. Is it not possible that the developing countries, now stand on the brink of a similar revolution which will eventually thrust them into the forefront?

Acknowledgement is made to the Food and Agriculture Organization and the World Health Organization, for information contained in their regular and occasional publications. The figures and maps taken from FAO and WHO reports have been modified slightly.

For further reading, the following books and journals are recommended:

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"WHO Programme in Nutrition, 1948—1964", WHO Chronicle, Vol. 19, pp. 429-443 (1965).

Democracy cannot survive if society chooses to be apathetic to lawlessness and disorder. Such neglect can lead only to anarchy.

Two hundred years ago Edmund Burke warned: "The only thing necessary for the triumph of evil is for good men to do nothing."

L'alimentation Dans L'avenir

by JOHN OWEN

Sommaire

Nous vivons dans un monde affamé, dans un monde dont la moitié de la population manque de nourriture, ou, de genre de nourriture, dont elle a besoin.

Les populations rapidement croissantes des pays sous développés sont celles qui souffrent le plus de malnutrition et de faim. Les jeunes enfants et les femmes enceintes surtout manquent d'aliments ayant certaines valeurs nutritives, donnant lieu à des déficiences proteiques, avitaminoses et anémies.

La grande prévalence de maladies chez l'homme et chez les animaux, doublée d'énormes pertes annuelles dans les récoltes, accentuent la pénurie alimentaire.

Ce sombre tableau est rendu encore plus sombre par les calculs indiquant que la population du globe doublera d'ici trente ans.

De récents développements, notamment en agronomie apportent une note d'espoir. Des récoltes de plus en plus riches résultent de l'enrichissement du sol, de variétés de céréales améliorées et d'une meilleure compréhension pour le contrôle des fléaux. Certaines importantes maladies humaines ont été contrôlées. Des valeurs nutritives ajoutées à certaines denrées combattent la malnutrition et mieux l'enrayent en la prevenant.

Les buts immédiats à atteindre sont: de mettre en pratique les connaissances scientifiques récemment acquises et de coordonner les programmes agricoles; autant de défis lancés aux programmes éducatifs et instructifs.

Les fermiers ont besoin de capitaux pour améliorer leurs méthodes d'exploitation et l'assurance d'un marché pour écouler facilement leurs produits. Il serait nécessaire d'instituer des réformes agraires dans certains pays en voie de développement.

L'espoir en l'avenir se rattache à l'utilisation intense des ressources, terre et eau. Les programmes d'irrigation de de pêcherie de grande envergure nécessitent des capitaux, et les pays riches pourraient venir en aide aux pays pauvres.

Par l'introduction de procédés biologiques dans l'industrie chimique de nouvelles sources de protides nous paraissent assurées. Les algues nous assurent des protides.

L'irradiation de céréales et d'autres denrées périssables offre la possibilité de reduire au minimum les pertes pendant l'entreposage.

Des programmes d'instruction fondamentale devraient stimuler les pays en voie de développement à améliorer leur situation alimentaire et pourrait contribuer éventuellement à la stabilisation des populations.

FOOD SERVICES AS RELATED TO SOCIAL GROUPS

Continued from page 7

passes the very real and human satisfactions which come from being a part of a meaningful social group—such a group always has a clearly defined goal and purpose, a willingness and ability to create and sustain functional interdependence, characterized by a two way flow of communication, which results in the consequent ordering of behaviour necessary to the effective functioning of any social group whether or not its primary purpose is the provision of food services.

REFERENCES

1. *Greer, Scott A., "Social Organization", Random House, New York, 1965.*
2. *As requested by the organizers of this conference, this paper was to deal with "the social advantages of institutional life and group feeding for mixed ethnic groups".*
3. *This matter of cultural differences as related to food habits is discussed in the article* Why Don't They Live Better, *Helen C. Abell, Canadian Food Journal, April 1963.*
   Another reference to cultural aspects of the feeding of pre-school children is found in Farm Radio Forum Project—Ghana 1964-65, *Helen C. Abell. Reproduced February 1968, Department of Geography and Planning, University of Waterloo, Waterloo, Ontario, Canada.*
4. *Such a programme is under way in the Province of Ontario in Canada.. Bill 148. An Act to Provide for the Services of Homemakers and Nurses was passed in 1958. This government act contributes to the cost of furnishing such services.*
5. *Personal communication from supervisor of Home Care Programme, Waterloo, Ontario, May 1968.*

The Direction of Home Economics in Canada

DR. LEWIS E. LLOYD — *Director*
School of Home Economics — University of Manitoba, Winnipeg

I would like first of all to refer to a 1959 definition from the committee on philosophy and objectives of Home Economics of the American Home Economics Association: "Home Economics is the field of knowledge and service primarily concerned with strengthening family life through educating the individual for family living, improving the services and goods used by families, conducting research to discover the changing needs of individuals and families and the means of satisfying these needs, furthering community, national, and world conditions favourable to family living." My only reservation with this is that we should be talking about strengthening community life through the problems of the family and the individual and this community can be the local one we live in, the one in our own country, or the one in our own planet.

The real problems for the future lie not in defining what our profession is but, first in assessing the methods we use in meeting the objectives; secondly, in our relationships with other professions and particularly those having overlapping philosophies and objectives; third, in our collective abilities to establish meaningful contacts with related industries, agencies, and others. These are very formidable problems on an individual basis, but they are all interrelated; one cannot be solved or neglected without solving or neglecting the others.

As a starting point, is there anything wrong with the name? I think there is, and not just because it doesn't define accurately the things mentioned earlier. "Home" and "Economics", this combination of words, does not describe our profession. There is need for greater clarity, not for those within the profession but very much for those on the outside, and particularly for those groups we should be interrelating with, the general public, prospective students, prospective employers, and research granting agencies. The last is a real problem. The National Research Council has put it down in black and white: Home Economics is not one of the areas eligible for scholarships. Students who are going to apply to N.R.C. must be sure to say they're in Foods, or Textiles or Nutrition, but not in Home Economics. That's a fact of life whether we like it or not.

The general public is very ignorant of the breadth of the activities encompassed by the profession and I believe that the tradition of the name has been responsible, at least in part, for the failure of the public to be really inquisitive enough to find out what goes on. We have to contend with concepts that people have. One, that goes back to the beginning of the century, is that Home Economics relates to agriculture and the rural homemaker. Another is that we are involved only with the how to do it of cooking and sewing. Those at universities will have the less-able student concept thrown at them. As Mrs. Murphy wrote in the American Journal of Home Economics some time ago, perhaps the only way to change this is to lop off the name.

A name change by itself will not straighten out all the problems but a name change, if we could find a good one, would be a productive effort if it forced those outside the profession to ask, "What do you mean?" "What does this new name mean?"

Is there an ideal name? I don't think there is and I don't think it matters, providing a name does three basically different things: first, that it helps to eliminate the misconceptions associated with the profession; secondly, that it reasonably identifies the activities of the profession; thirdly, that it maintains the identity of the profession.

The last is a real problem. At the moment seven out of 19 degree granting institutions in Canada are not called Home Economics, so we have a loss of identity already starting.

At a meeting at the University of Manitoba of deans and directors of Home Economics in Canada it was agreed that a name change would aid in recruiting desirable students from the high schools and help to achieve better liaison with other university

Presented at "Direction '69" at Ryerson Polytechnical Institute, 1969.

disciplines and with outside groups. However, a name change would not guarantee a new image to Home Economics. A year ago we talked about human ecology as a possible name. It was indicated that this was an "in" word, but again it is so broad that it infringes upon almost every other discipline in the university context that deals with human problems at all. Medicine could be considered a form of human ecology; so could dentistry. There is a wide variety of professions that exist in university life and in practice that would overlap with this particular word. From this last meeting of directors in Home Economics there was a strong indication that we should be spending less time worrying about the name and more time concentrating on developing within each faculty or school competence in at least two areas, if not more. That is, in those areas within the great variety of things we say Home Economics is. If Macdonald College is now a school of Food Science, if they are going to concentrate on problems of nutrition and food and not emphasize human development and textiles, then it is quite legitimate that they not be called Home Economics. So the gist of the thinking at this stage, I gather, is that we should be considering a development of competence within each school as a primary objective. The name problem was not dropped, however, and we agreed to take another look at it a year hence.

I would like to talk about interaction with other professions. On this topic I would be remiss if I did not refer you to an article called Professional Interaction by Dr. Helen LeBaron, Dean of the College of Home Economics at Iowa State University. This is one of the most stimulating articles I have read pertaining to Home Economics. It appeared in the September, 1967 issue of the *Journal of Home Economics*. The following excerpts from the article are relevant and need no elaboration from me:

"If we are dedicated to improving conditions of living for individuals and families, we must be where the action is. We must get into the action, become involved, interact. Interaction signifies activity with others that means influencing others and being influenced by them in turn. Interaction is a dangerous undertaking, for those who participate in it are changed by the experience and change is exciting as a topic of conversation but traumatic as an event. Whenever two groups interact, they act upon one another so that neither is quite the same as it was before. It is much safer to follow parallel lines, that is to work toward common ends, than in separate territories or each with the clientele it knows best.

"If the home economist, the public health nurses and the family welfare workers interact, each of the three groups will learn something of importance from the other two. All will be vitally concerned with the impact on the families to be served; each will modify its own contribution to the end that a common goal may be reached. Finally, interaction may be so successful that no one of the professions earns a credit line for its effort. Perhaps this is the reason why many professions do not interact, for the fear of losing the credit line.

"The lines that separate the professional specialties are not present within the real situations with which the specialist deals and this must be very important to Home Economics. A family or personal problem is never exclusively one of health, of employment, money, housing, or personality interplay. In most instances a team approach of professionals working together is needed, an interacting group that can merge their expertise in some meaningful fashion. Home economists are and can be, and should be on many such teams."

How does this affect us? At the Manitoba meeting it was agreed that at the university level this kind of professional interaction was absolutely necessary if the profession is to grow and thrive at its origin and I think this is its origin. If we don't have the places to train people, we're not going to have people working as professionals. It was agreed that the teaching of specific courses should be shared with other faculties in the university; that this could do a great deal to further interaction with other areas at the university.

Interdisciplinary research certainly can make a major contribution to making other areas of the university aware of the very things that people in Home Economics do. The nature of the profession is such that the only kind of research that Home Economics schools or faculties should be in-

volved in is research which is potentially of interdisciplinary character. We shouldn't be doing little bits of research in isolation.

A word on liaison with related industries or agencies. To establish the right perspective, consider the diversity of business with which the home economist has professional associations. These will include the textile, clothing, and food industries, appliance manufacturers, laundries and dry cleaners, advertising agencies, communications, public utilities. The list supports my earlier contention that Home Economics is involved with strengthening community life through its concern with various problems of family living.

Now, outside of home economists who are actually employed in business (the figure in the U.S. is 5 to 6 percent) the observation has been made frequently that home economists in general have shown a reluctance to become closely associated with industries or agencies with which their training should relate them very closely. I think this is regrettable. There is so much to be gained from association of this kind. In considering methods that we must use to meet the objectives of the profession I believe that one of the most significant is to establish a close liaison with those industries or agencies related to our activities.

How do we do this? I feel very strongly that it is up to the home economist to take the first step. We are not in the position to sit back and wait for these potential colleagues in industry to come to us. How do we make this contact? I feel that we must first analyze ourselves, know what our potential is, know our place in the profession, and when we do this I think home economists will elevate their self esteem. Then our people should familiarize themselves with the industry that they are going to make contact with so that they have some awareness of where their particular competence can fit in. The point is that the obligation is on the home economist to make this contact. It cannot be made for us.

I would like to say something about Home Economics in the high schools. This is the group in the profession that has the most difficult task in deviating from conventional practices. At the same time, I suggest that those who are teaching in our schools are to a very great extent responsible for the cooking and sewing association that is left in the minds of the general public. How many parents do we hear talking about their daughters and saying, "So-and-so enjoys her Home Economics so much in school. She's already a good cook; she does all sorts of things when she comes home, and she made a beautiful skirt the other day."

These are the activities they hear about. Now even if curricula are set up to provide material on nutrition, on human development and child development, these are not the things the kids will bring home with them. People in the secondary education system know that the attraction for the students is for the laboratory part of the course. We know that this is what the girls want. And we have this problem: if we make things so academic that students cannot do the things they really want to do, are we not defeating the whole purpose?

I ask, could foods labs be conducted in schools without ever discussing recipes? Could clothing labs be conducted without patterns? Could laboratory periods be devoted to a series of simple experiments concerning nutrition, foods, textiles, and clothing without having to prepare an acceptable dish or to construct a fine garment? I think they can. And I have great confidence that the ingenuity of the Home Economics teacher can be relied upon to do this. The teacher's ingenuity could be augmented greatly if she could make a point of discussing her problems with the other teachers in the school, especially those concerned with general science, biology, chemistry, social studies.

Interact! Get to know these people. In addition, certainly she would have to rely heavily on help from her counterparts in the closest university. This could be difficult where universities are not close at hand. Another example is that a high school teacher should be aware of some of the problems of the local garment industry, if there is such. The simple experiments that she might set up would be so much more meaningful to her classes if they related to a problem in a local factory.

How about the university level? In recent years it has become obvious that there is demand for specialized majors within Home Economics and hence we must be prepared to construct curricula which will provide graduates with specialized skills.

However, we must not lose sight of the primary need for the broad unspecialized major in general Home Economics. This need is obvious when we realize that a great majority of our graduates become involved in education, enter business, and general homemaking.

In this context I refer to an excerpt from Dr. McGrath's article in the Changing Mission of Home Economics: "Home Economics as an undergraduate major can best confirm its heritage and meet present challenges by retaining a strong generalist major and expanding its interdisciplinary base in order to fully comprehend contemporay social problems and those of family life. Since the scope of concern of this undergraduate major ranges from human development to consumer economics its content must be closely integrated with the best analytical disciplines such as biology, socialogy, and psychology."

What about postgraduate programs? In this area both course work and research must stress professional specialization. My firm belief is that the establishment of viable research programs in schools of Home Economics is an absolute necessity if the profession hopes to attain full and meaningful recognition both within the university and outside it. Home Economics can do a great deal for itself as a profession by establishing research programs, and again those of an interdisciplinary character.

We noted earlier that ours is the only profession dealing with several aspects of living with their interrelationships and with the patterns they form. These facts dictate that our research and endeavors must be tied in with others. We cannot rely on other departments or on industry coming to us. We must go to them. We must go to the other departments on campus and say, "We have compentence in this area, we have individuals interested in doing this, will you co-operate with us?" And it's amazing to find people who have lived side by side with Home Economics people for years saying, "Can you do this? Is it in your field of endeavour?" They don't know. We must see that our undergraduate students learn to work with other professionals even before they leave the campus.

The dietetic profession. This again is a rather distinctive group in Home Economics because of their certification by and registration in their own professional association. Notwithstanding, their problems are not far removed from those who are in other areas of Home Economics. Publicity devoted to dietitians is almost exclusively devoted to the therapeutic dietitian. The role of the administrative dietitian, the research dietitian, the teacher of dietetics in hospitals, the consultant in dietetics and nutritionists in general is only touched on lightly. Why? I think that the blame in part, only in part, lies with the individuals themselves. There has been in general a lack of initiative and a lack of appreciation of personal capability.

In the case of the administrative dietitian, certainly the time has come when exposure to various aspects of business administration is a prerequisite to her successful functioning. This exposure can be either formal or informal. The research dietitian has much to offer to medical and public health nutrition teams. However, I'm afraid that her contributions to date have been in fringe areas primarily because she has not taken the time (in many cases because she does not have the time) to become familiar beforehand with the research project that the doctor is engaged in to convince him of the contributions that she can make beyond preparing the meals for the patients in the metabolic ward. She along with consultants in dietetics and nutritionists with Home Economics training, must learn to force their way into areas they would like to be in.

Home Economics people can form the hub of a wheel with hospital and business administration people, to formulate a master's degree in administrative dietetics. Again, Home Economics people with the medical people and the hospitals could form another stream for a master's degree in therapeutic work and general nutrition. These are thngs we have to look for.

New career opportunities are very important. For example, today we have an increasing number of welfare services and it becomes obvious that Home Economics extension workers have a role now and in the future quite removed from their traditions. It follows that appropriate training must be made available and from then on the extension workers themselves will have to be interacting people willing to respond to welfare trends, population shifts, and internationalism.

Continued on page 31

BOOK REVIEWS — FILMS — FILMSTRIPS

Nutrition For Today—Elizabeth Chant Robertson, M.D. PhD.—McClelland and Stewart Limited, Toronto, Montreal—Third Revised edition, 1968.

This book has been extensively revised to include many of the new food products. It also outlines a number of recent regulations of the Food and Drug Directorate of the Department of National Health and Welfare, and includes the most up-to-date editions of both the Dietary Standard for Canada and the Recommended Daily Dietary Allowances of the Food and Nutrition Branch, National Research Council, U.S.A. Recent well confirmed discoveries in the field of nutrition have been incorporated.

The topic and format are generally the same as the previous editions—the twelve chapters discuss each of the food groups, calories, overweight and underweight, meal planning, tooth decay, food facts and fancies, and nutrition education resources in Canada. The author has a very interesting, practical and stimulating approach to the subject, making the books exceptionally useful to public health nurses, teachers, medical, dental, home economics and social work students as well as housewives and parents. The author has wisely included a list of references at the end of each chapter, and all bibliography material has been up-dated.

The reviewer made a comparison with the previous editions and has recorded some of the changes and additions.

1. Whereas in the previous edition, the author referred almost exclusively to the U.S. Recommended Allowances, in this third edition both the U.S. Recommended Allowances and the Canadian Dietary Standard are given for each of the nutrients except thiamine—(printer's error?) allowing the reader to compare the generous but not extravagant U.S. recommendations with the more basic or "floor" levels specified in Canada.

2. In the chapter on Bread, Flour and Cereal Products, iron has been added to the list of significant nutrients contributed by this food group. More information on spaghetti, macaroni and pasta products, various types of rice has been added and the information on cereal products has been up-dated.

3. In the chapter on Milk and Milk Products, recent regulations regarding the addition of vitamin D to milk, infant formula and margarine is most helpful.

4. The approach in the chapter on vitamin D has been entirely revised—and includes detailed information and how babies and children can get their daily recommended intakes, with decreased emphasis on pharmaceutical preparations.

5. Under "Other Major Nutrients" the section on fats has been completely rewritten, and an explanation of saturated and unsaturated fatty acids, is given, and a discussion of the animal fat—atherosclerosis controversy is included.

6. In the chapter "Calories—overweight and underweight" the revised tables of Desirable Weights of the Metropolitan Life Insurance Company has been included. An added reference has been made to the role of moderate exercise in helping to control appetite and help prevent overweight.

7. In the Meal Planning chapter the "suggested Weekly Quantities of Food as Purchased" for low cost meals has been revised to be more representative of a sample family, and the foods have been more logically grouped into eleven categories.

This well authenticated, appealing and basic text in family nutrition deserves a place on the shelf of every library in Canada. — *Beverley Reichert, Director of Nutrition, The Milk Foundation of Ontario, Toronto.*

Home Planning and Design—C. H. Jensen—Canadian Technical Publications Co., 328 Lyndview Drive, Whitby, Ontario.—1968, 90 pages, $1.75 (less 20% educational discount).

The 45 pages of text in this book contains authoritative information from leading manufacturers and is well illustrated with 2-colour photographs and sketches. This is divided into three sections:

—Types of family housing
—Room plans—including suggested floor arrangements
—Supplementary planning features such as information on fireplaces, colour planning and electrical requirements.

Probably not large enough or complete enough to be used as a text, this section

does contain basic information which could be useful for review or quick reference.

The second half is a workbook with over 100 room planning assignments on perforated sheets for easy removal. There are 34 pages of floor plans (drawn to scale) of all the rooms in a house as well as apartment and small house layouts. To help with colour schemes there are a number of pages showing wall elevations (with furniture in place) as well as the colour wheel on the cover.

Also included are 2 pages of graph paper, a furnishings cost sheet and, perhaps handiest of all, a plastic template containing scaled outlines of furnishings and fixtures.

Useful as a classroom workbook or for those interested in decorating their own home. — *Carol Taylor, Ryerson Polytechnical Institute, Toronto.*

BOOKLETS

Accent Decor (La Clé du Décor)—a 12-page illustrated booklet in colour describing 7 original room settings—by noted New York designer William Pahlmann.

The settings, including 7 bathrooms and a kitchen, are lavish in colour and pattern but use ideas and materials adaptable to the average home and budget. Available in quantity, free of charge, in English or French, from Scott Paper Ltd., Food Fifth Ave., New Westminster, B.C.

NEW FILMS

CANADA PRODUCED (16 mm. colour/sound). A highly interesting, behind the scenes look at food processing. The film includes a description of Canadian research and the production of pharmaceuticals, livestock and poultry feeds. In full colour, the setting of this film takes you from an average kitchen through many aspects of Canadian products.

The film is of major interest to consumers and students. Running time of the film is 27 minutes.

Available on Free Loan. Mail request to: Canada Packers Film Library, 1875 Leslie Street, Don Mills, Ontario.

"GOOD LOOKS/HERE AND NOW" (16 mm. colour/sound). This film is designed to broaden the understanding among students of both junior high school and high school age of the relationship of cleanliness, good health and good grooming. It also provides a series of demonstrations and specific techniques that advance good grooming. Running time of the film is 17½ minutes.

Available on Free Loan. Mail request to: Canada Packers Film Library, 1875 Leslie Street, Don Mills, Ontario.

Consumers' Gas has available a series of cooking films on various subjects.

The titles are as follows: 1. Pennsylvania Dutch (German); 2. Chesapeake Bay (Seafood); 3. C'est La Vie (French); 4. Italian Cooking; 5. Pleasures of Chinese Cooking; 6. Creole Cuisine; 7. Scandinavian Cooking (taken from the new "Time Life" Book); 8. Cooking Al Fresco (B.B.Q.).

Recipe sheets similar to the ones attached accompany each film. They are available free of charge by writing to the library at the Consumers' Gas Company, 19 Toronto Street, Attention: Mr. A. McGrady.

FILMSTRIP KIT

"Glass is a Marvelous Thing"—and so is the new filmstrip of that title! For a comprehensive kit including filmstrip, teacher's manual, 30 student leaflets and 12-inch record the price is $5.00. Without the record, the kit is available for $3.50. Additional copies of the student leaflet are 5¢ each. Available from the Home Economics Dept., Corning Glass Works of Canada Ltd., 135 Vanderhoof Ave., Toronto 17, Ontario.

"Six Easy Steps to Perfect Pastry" (35 mm. film strip). Successful pastry making is explained simply and fully in this new film strip. The script carefully suggests the best method of preparing and baking tender, flaky pastry. Special care has been used to explain the "why" and "how" for each easy step.

Kits, available on a purchase basis, consist of a film strip with 25 full colour 35 mm. frames, a comprehensive script and 30 informative pamphlets.

Kits may be purchased by sending a money order made out to—Canada Packers Limited, for $3.50 (price includes tax) to: Film Strip, Box 3675, Terminal 'A', Toronto, Ontario.

Abstracts of Current Literature

Submitted by the staff members of HOME ECONOMICS DEPARTMENT
MOUNT SAINT VINCENT UNIVERSITY, HALIFAX, NOVA SCOTIA

Whey for foods and feeds.

S. M. WEISBURG AND H. I. GOLDSMITH
1969
Food Technology, 23:186.

Whey is the fluid portion of milk obtained by coagulation of casein during the manufacture of cheese. It contains the proteins, lactalbumin and lactoglobulen and minerals, lactose and water soluble vitamins.

It could have many uses in the food industry and in the past was a popular social drink but recently, because of high production costs, it has rarely been used. It has instead been treated as a troublesome waste product by cheese manufacturers. In the U.S.A. for the year 1966 over 1.3 billion pounds of whey were available because of cheese production and yet only 52.3% of this was used as food or animal feed.

However, a new method of drying whey has been developed. This method uses reverse osmosis which is a membrane permeation technique for separating water and other small molecules from solutions containing larger molecules. There are still problems involved in the use of this process but it will probably lead to reduced production costs and increased production and use of dried whey.

Many uses for whey have been proposed. It adds tenderness to baked products, stabilizes sauces and gravies, and enhances flavours of products containing chocolate and spices. Large volumes can also be used in the feed industry.

Its uses are similar to those of nonfat dried milk but it sells for one third the price of nonfat dried milk. This offers another incentive for greater use of whey.

Decreased production costs, increased cheese production, and discovery of new uses for whey in foods should change whey from a common waste product into a new food product.

Vitamin C concentration of plasma and leukocytes as related to smoking habit, age, and sex of humans.

M. BROCK AND J. J. GRIMSHAW
1968
The American Journal of Clinical Nutrition, Volume 21, Number 11, pp. 1254-1258

Men are known to have significantly lower serum and plasma levels of Vitamin C than women and low levels of Vitamin C in blood components of the elderly are common. A significant decline in whole-blood ascorbic acid content with age has been reported in men but not in women. This article describes a study to determine the effect of smoking on Vitamin C concentration of blood of men and women of various ages.

The group studied was 54 men, 84 women age group, 17 to 63. They were classified as non-smokers, moderate (1-14 cigarettes per day) or as heavy smokers (15 or more cigarettes per day).

At all ages women were found to have a significantly higher plasma Vitamin C concentration than the men, and for the two sexes there is a significant decline as age increases.

The mean plasma Vitamin C concentration of male heavy smokers and moderate smokers are significantly lower than that of non-smokers. Because of the age-related decrease in plasma level of non-smokers the difference is no longer significant when non-smokers reach 40 years of age, and the plasma concentration for male non-smokers at 60 years is similar to the mean for male moderate smokers.

For females, there is no difference between plasma levels of moderate and heavy smokers. In the female smoker the plasma level is significantly lower than in young female non-smokers. By 60 years the values for all three groups are similar.

Unlike the plasma values there is no sig-

nificant change in leukocyte concentration as age increases. The women had higher concentration than the men. Smoking cigarettes is associated with significantly reduced leukocyte Vitamin C concentrations in males and females.

The habit of heavy smoking has the same effect on plasma Vitamin C concentration as increasing the chronological age by some forty years.

Teaching strategies to promote thinking.
H. T. SPITZE
Winter 1968/69
The Illinois Teacher Vol. XII No. 3

In choosing a technique of teaching, a teacher must look to the needs of her students, what methods further her objectives, what method fits the content, what method will enable students to experience success and make it enjoyable to them. Will the student see usefulness in the learning and will it develop independence in the student and develop skills of inquiry and promote thinking? The teacher must have her objectives and content clearly in mind when choosing a technique that will develop the students' ability to think.

People think when they have a problem to solve. These can be real problems or "created" problems in which the student identifies with a character or a problem to be solved. There are many ways of stimulating students to think. It may be creating plans for displays, decorating a store window, writing menus for a school cafeteria or helping a destitute family in menu planning and budgeting.

When students make decisions, solve problems, think, they have to choose from alternatives. These alternatives must be explored, weighed, analysed and evaluated in order to make the best choice.

In Home Economics Classes we need to help students to compare, summarize, observe, classify, interpret, criticize, collect and organize data, apply facts in new situations and make decisions. It is important that the problem is real to the student so that the quest for a solution will be interesting and stimulating. The best results come from problems which start from the student's curiosity, where he, the student, asks the questions and seeks the answers for himself.

E. Mewhort

The third generation of man-made fibers.
1969
American Fabrics. No. 82. p. 47

A large proportion of this current issue is dedicated to the outstanding developments that are constantly taking place in the textile industry.

Three generations of textile fibers, with some overlapping, are at work. During the first generation chemists invented the basic technology for fibers made by man. These basic generic fibers are being sold to standardized markets, usually without benefit of a trade name.

The second generation, due to the demand for "natural" qualities in man-made fibers, is the modification of generic fibers, now made in different versions to improve performance and aesthetics. This made its impact in 1965-66. They tend to emanate from the laboratory, are usually designed for a specific end use and are sold under a brand name.

The third generation represents specifically engineered fibers aimed at highly specialized markets. Predetermined aesthetics and performance are being built into the fibers at the production level. Although few fibers belong to this generation, which almost parallels the second generation, their success foretells the whole future of the textile business. This new phase of sophistication results from a mixture of scientific pride, commercial necessity, aesthetic need and consumer demand.

Most representative of the "new age of fibers" are the following:

(a) *Bi-components*—composed of two generically similar polymers, of different chemical or physical properties, joined side by side in a single filament. These are a means to self-crimping or self-bulking. "Cantrece" nylon by DuPont is an example of this type.

(b) *Bi-constituents*—composed of generically different compounds joined together or dispersed one within the other. The first major fiber in this group is Allied Chemical's new carpet fiber "Source", composed of 70% polyamide and 30% polyester.

(c) *Blended filament yarns*—a coherent bundle of dissimilar filaments with no limi-

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NEWS — About Food and Equipment

Anyone for Bacon

Without all the fuss and muss of cooking it? There are now on the market two substitutes—Blue Ribbon Bacon Bitts by Brooke Bond in a 3¾-oz. jar and Bacon Flavoured Bits by Nabob in a 1-oz. jar.

Each is a vegetable protein product that has the appearance, flavour and crisp texture of cooked crumbled bacon. Even the smokiness seems to be there. Of course, the advantages in using this exciting convenience product is that it doesn't require cooking or refrigeration, has a lower fat content than bacon and costs less—especially tasty in egg dishes and meat loaves.

Omelet Seasoning Mixes

Another exciting French's mix from Reckitt and Colman. There are three flavours—Country Style, Mild Cheese, and Onion—any one of which added to an omelet makes it outstandingly good. The cheese one retails for 25¢ and the other two for 19¢. Take fresh eggs and one of French's Omelet Mixes and you'll become famous for your omelets.

Fresh Milk That Keeps

A Toronto dairy made history last fall by going into full commercial production of Long Life milk. This bacteria-free milk concept, though new to Canada, has been known in Europe for a considerable time. This aseptic milk in paper pyramid-shaped packages called Tetra Pak, can be stored for many weeks without souring because it is completely free of all micro-organisms. As well as the 17.6 fluid oz. and 8.8 fluid oz. sized packages of milk, there are smaller sized "creamers" of .88 fluid oz. So far, the distribution of Long Life milk by Nelson's Dairy Ltd., Weston, Ont., is limited to Ontario but, no doubt, its popularity due to its keeping qualities, will make its distribution expand rapidly.

Rapid Mix

Standard Brands Ltd. has developed a new "Rapidmix" method for making breads using Fleischmann's Rapidmix Active Dry Yeast. The product was presented to the Western Canada market (as far East as Fort William and Port Arthur) the first of August, 1968. It is planned to introduce it in Eastern Canada in the Fall of 1969.

Fleischmann's Rapidmix Active Dry Yeast is actually the same product as the former Fast Rising Active Dry Yeast, although it is of a substantially finer grind, which enables the product to blend rapidly with other dry ingredients. There is no need to pre-dissolve the yeast, and the use of an electric mixer for faster mixing, will serve to preserve valuable time and energy of the busy homemaker.

If the traditional water dissolve method is preferred, Fleischmann's Rapidmix Active Dry Yeast can be used with the same excellent results. Dissolve one teaspoon of sugar in ½ cup of warm water called for in the recipe. Add contents of one package of Fleischmann's Rapidmix Active Dry Yeast, or one tablespoon. Let stand 5 to 10 minutes, then stir well. The dissolved yeast can be used as directed in any recipe.

When using the Rapidmix method, the main points that should be emphasized in order to obtain a good product are:

- The temperature of the liquid is of very little worry with Fleischmann's Rapidmix Active Dry Yeast. If only water is used, take it warm, directly from the hot water tap. If water and milk are used, heat with the margarine over low heat until warm.
- It is important to have *only ⅓ of the flour* and all other dry ingredients (salt, yeast and sugar) in the bowl when adding the liquid.
- When beating the liquid into the dry ingredients (salt, yeast, sugar and ⅓ of the flour), it is important to beat for the full *two minutes*.

A wooden spoon or any mixing spoon can be used for mixing, but a rotary hand beater or an electric beater would be helpful for this step.

Chafing Dish Cookery

Sterno canned heat is not new but it's interesting to note that both the U.S. and Canadian governments permit it to be sent through the mails without any distinguishing marks because it has been found to be absolutely safe. Since it remains solid while

burning, it cannot spill and does not tend to create explosive gases. While burning, it is odorless and smokeless, so is especially popular for chafing dish cooking, for hibachis, and food warmers and even for starting log fires. Here's another idea—it's practical to have on hand for emergency cooking during storms and power failures. The 2⅝-oz. size (about 29¢) burns approximately 45 minutes and the larger 7-oz. size (about 59¢) last for 1½ hours. They're available at supermarkets, drug and hardware stores.

Tilt-Guard Door

The first week in June, The Canadian Westinghouse Company introduced a new SCK6A Dishwasher that is portable today but could be built in tomorrow. Its special feature is the new Tilt-Guard Door, which makes it impossible for the dishwasher to tilt or topple, no matter how heavy a load may be placed on the open door. This is a safety release feature that protects your dishes, protects your dishwasher and protects you. It also permits the casters to be concealed underneath for a stream-line appearance. This model has 6 push button cycle selections, Westinghouse Sanitizer, self-cleaning filter, white porcelain-on-steel tub, multi-level washing action, lighted cycle-line dial, maple lift-off cutting board top, rinse wetting agent dispenser, aerator and water release button, dual detergent dispensers, retractable power cord reel, plate warming setting (a real asset), silverware basket with covered compartment, telescoping top rack, concealed easy-roll casters. It is available in white, avocado, coppertone, goldtone.

New Miracle Oven

Self-cleaning electric ovens have always won my admiration. Now I can be even more ecstatic about the new miracle gas oven that cleans itself automatically. This because the gas range cleans itself as it is being used. Its walls and bottom panel are made of a special porcelain enamel called by the Hardwick Stove Company "Everkleen". They contain a catalyst which, when heated, reacts with food spatter and grease continually during the normal roasting or baking period. So no extra heat is needed to clean the oven as with most electric ranges that self clean by "pyrolytic action" after the baking period is over.

Another company, the Findlay Stove Company of Carleton Place has also brought on the market a similar self-cleaning gas range using "catalytic" action. Instead of panels, the Findlay oven is completely coated with this special porcelain material. This new discovery adds only $40 to $50 to the cost of the range.

MARJORIE ELWOOD

WHO'S WHO IN HOME ECONOMICS

Continued from page 8

rector a wealth of experience and a deep interest in Home Economics. She thinks that, "this age is an exciting one in which to live and be involved in a field such as Home Economics. That to communicate the role of Home Economics to others as a humanist subject, dedicated to strengthening family life and developing individual capacities, is a real challenge and a rewarding experience."

Our Director for Ontario is a seasoned traveller and has enjoyed visiting many parts of Canada and the United States as well as other countries. She says that, "people, scenic views and history are the drawing cards."

ABSTRACTS FROM CURRENT LITERATURE

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tations to the number and type of filaments which can be combined in this way. The only one on the market at present is Celanese's "Arnel plus Nylon".

In addition to the above mentioned groups, other technological innovations have been revealed. Monsanto's "Bi-loft", a blend of a bi-component and a mono-component, both are types of Acrilan; Allied Chemical's "Touch", a tri-lobal nylon; Hystron's penta-lobal polyester "Trevira"; DuPont's "Qiana", a new silk-like generic fiber.

Compared to the other fiber generations, the third is still in it's infancy, but there is no limit to how fast and how big they can grow. Fiber science promises eventful years in the immediate future.

The Federal Department of Consumer and Corporate Affairs

THE HONOURABLE RON BASFORD
Minister of Consumer and Corporate Affairs

The new spirit of consumerism which is sweeping the entire western world is having a profound effect on your profession as it is creating an increased demand for highly qualified home economists to take up totally new careers in industry, science and government. I think that you, as professional home economists, whether you are teachers, dietitians, textile specialists or administrators must be directly concerned about the quality of information available to Canadians when they buy food, clothing, major appliances and other household goods, and you are the one group of people who have the professional qualifications to judge that information.

It is very hard to be a good consumer. Very few people are prepared to admit that they are not very good at it. We are more likely to become experts after the purchase is made rather than before. How many times have you listened to a friend complaining about something she has bought which has not met her expectations and heard the phrase "If only I knew then what I know now". If we had better programmes for consumer information in Canada today, our consumers would know what they were doing before they did it, and the number of complaints received by Box 99—the consumer complaint service set up by my department—would be markedly reduced.

You are all familiar with Box 99—the postal address for our consumer complaint and enquiry service. Last year alone, when we were just getting organized we processed over 4,000 complaints and enquiries. When you consider that every complaint between a consumer and a retailer or manufacturer requires at least four letters, and sometimes as many as 15, this is a major achievement.

These letters give us a very good idea of what it is that the consumer does not know. We realize that the manufacturers are not providing enough information. We also know that the consumer protection legislation of the federal government needs further explanation. And we have ample proof that the average consumer has a very poor idea of everyday economics.

When a young person enters the labour force today, the department stores, gasoline companies and lending institutions mark the occasion by sending him a flattering letter and his own credit card. Armed with these cards and a bi-weekly salary cheque, the average young man sallies forth into the marketplace and, within only a few weeks our hero will have a new suit, a second hand car, at least ten of the latest L.P.'s, and several hundred dollars worth of debts. He will have signed contracts which he probably did not read in full and certainly did not understand. And he will have a very little idea of how much all this credit is costing him.

It won't be very long before this young man incurs yet another debt—time payments on an engagement ring. Now, if he is lucky enough to marry a girl with a home economics degree, and if he is smart enough to leave the budgeting to her, it is likely that his economic affairs will be sorted out eventually. But perhaps he will marry a young lady who left school after junior matriculation and had an office job for a year or two—paying a nominal room and board fee to her parents and going on a spending spree with the rest of her salary every two weeks. The economic facts of life are about to dawn upon our couple with depressing clarity—apartment leases, rental payments, purchase of basic household equipment, grocery budgets, clothing expenses, savings for vacation and major purchases. Will our young couple be able to handle these matters? Will they be able to exercise their own discretion in the marketplace, making their own economic decisions? Or will they be like so many people today—who muddle along not real-

Presented to the Home Economics Association of Ottawa, March 24, 1969.

ly understanding how it all works—getting talked into things they don't really need at prices they can't really afford—always wondering where all the money has gone when there is another whole week before payday—and occasionally finding themselves with a real problem on their hands and not knowing how it happened? Lawyers' offices are full of people like these.

It is because of this that my department is going into the consumer information business to the limit of our human and material resources. We must explain the marketplace to the Canadian public. But we cannot possibly do this effectively on our own. We need the very real co-operation of the provincial governments, private bodies, professional groups, and trade associations. I am glad to be able to tell you that we have that co-operation and that you will shortly hear about publications and other informational material which has been produced out of a strong working partnership of all of us concerned with the Canadian consumer.

One of our most important information activities is the periodic publication of the Consumer Communiqué. This pamphlet goes out to a mailing list of 30,000 people. The subjects being covered in the coming year include such topics as warranties and guarantees, types of consumer credit, how to cope with unsolicited merchandise, misleading advertising and Christmas tree lights—to mention only a few. We are also planning the production of a booklet on all the federal legislation and programmes designed to protect the consumer, another on our hazardous products legislation and safety in the home, and a film on consumer practices. Within the limits of our resources, we shall be utilizing all the media to put our message across.

The householders of Canada need a better understanding of the standards, grades and protective legislation already in existence. My department will be giving as much publicity as it can to our new consumer legislation as it comes out. Our Hazardous Products Bill has already received considerable attention in the press, but it will not be fully effective until the general public learns that they must read the cautionary labels on the insecticides, furniture polishes and other dangerous substances in common use around the house. We cannot legislate on every facet of human life; we would not want to. But how do we stop the housewife from storing her cleaning materials under the kitchen sink where any small child can easily find them? The only way to cope with this type of problem is through a continuing programme of consumer information carried on by all levels of government, private groups such as the Consumers' Association of Canada and professional associations. We need your co-operation to help us put this information across to the people of Canada.

There are two segments of our adult population which are particularly susceptible to sharp selling practices and fly-by-night operators—new immigrants to Canada and our more elderly citizens.

Persons who have just come to Canada and who have a poor knowledge of English or French usually do not understand how our market operates. Yet, they have to go out into that market very shortly after their arrival to buy food, equip their homes, acquire clothing suitable to our climate, etc. Some areas provide excellent orientation courses for new immigrants, but in many other places the new arrival is left to learn his consumer lessons the hard way. He is afraid to raise too much of a fuss when he is cheated and he does not know where to lodge a complaint. We in the Department of Consumer and Corporate Affairs will be looking into this problem but I hope that other levels of government, professional associations and volunteer groups will realize that this problem exists and move along with us to try and solve it.

The problems of the elderly are heartbreaking ones. Many older people are confused by the technological advances of the past quarter century. They are readily intimidated and, unfortunately, they are far too easily talked into unnecessary repairs to their chimneys, their wiring or their windows. Fast talking operators, sometimes masquerading as building inspectors, convince them that they will be breaking the law if they do not have these repairs made, and exorbitant fees are charged for minor or non-existent repair work. The selling and servicing of hearing aids is a problem of such widespread extent that we have established an inter-departmental committee to cope with it. Only a few days ago I received a letter from an elderly gentleman

in one of our western provinces who has purchased four hearing aids over the past 14 years. Every time the batteries go dead and he sends them back to the company for repairs he is told that his set is obsolete and that no spare parts are available. They tell him that he has no alternative but to buy another set—and the latest price he was quoted was $800 which is a formidable amount for someone living on a fixed income. I can only agree with his comment: "They think they have us old people over a barrel and are taking advantage of it. I think they should be compelled to stock parts for at least ten years." Older people must be convinced that any "get rich quick" schemes should be carefully reviewed by someone familiar with business opportunities. People who sell chinchillas for breeding, or knitting machines or vending machine franchises quite often take advantage of older people who are not astute enough to detect any element of fraudulence. Elderly people are also likely to be victims of medical quackery and to the promotion of various magic medical devices or cures of the assorted ills to which they are subject. The annual bill for nostrums is enormous and depends heavily on the gullibility of the elderly people whose understanding of medicine is limited. Another racket which impinges on retired people is the sale of land at bargain prices or a rose-covered cottage in some Mecca for retired people. As home economists you must be aware that elderly persons who live alone often do not eat properly. They need help on the purchasing and preparation of food relative to their limited budgets. I hope that your association is offering its assistance to the volunteer groups who work with senior citizens.

Now, the problem which all of us concerned about consumer information face is how to get our material into the hands of those who really need it. The newly arrived immigrant or the elderly citizen does not readily write to a government department asking for official pamphlets. They must be reached by personal contact, by newspaper, radio and television. There are excellent public service programmes on our radio and T.V. stations across Canada which are only too glad to publicize well-documented, consumer information. My department is already providing material and personnel for such programmes and we shall be increasing our activity along these lines, but I hope that professional associations such as yours will also establish contact with the producers and join us in this effort.

The Canadian Association of Adult Education is currently in consultation with my departmental officials and with community leaders right across Canada to assess the specific areas where consumer information is particularly needed. They hope to set up a series of regional conferences.

There is one other project I would like to mention to you because it is an excellent example of how organizations outside of any level of government can participate in a consumer information programme which makes a valuable contribution to the community and gets the organization's message across at one and the same time. The B.C. Credit Union League in co-operation with the Provincial Executive of the Social Studies Teachers has produced a kit of slides and printed material on credit unions, money management and quite varied consumer information. They have made one kit available free to every secondary school library in the province. This is one type of project that I recommend to financial institutions, commercial organizations and professional bodies who profess a concern for the welfare of the Canadian consumer.

The need for information here is enormous, and it cries out for the concerted efforts of all of us. We are doing everything we can to fill this need and we invite you to join us.

I can promise you the full co-operation of my department in any projects which you, the Canadian Home Economics Association, undertake to increase and improve the quality of consumer information in Canada.

People sneer at restrictions and demand more and more freedom. Their taste of liberty and their dislike of restraint cause some to go from liberty to license. They abuse freedom, disregard the rights of others, and exceed their own rights by breaking the rules of conduct laid down by the majority.

Biology: The Ultimate Science

DR. ALEXANDER L. E. MIDDLETON, *BSc, MSc, PhD.*
Assistant Professor Ornithology, University of Western Ontario, London

Perhaps it should seem presumptuous that I, a professional zoologist, should choose to speak to you on the topic, "Biology: the Ultimate Science". Certainly I have a bias towards biology. However, having contemplated this topic for a period of time, I feel that even though I am biased, what I have to say is vital if we human beings are to survive as a species upon this planet. But before I begin I must admit that my topic is not original to me. It is borrowed from the C.B.C. University of the Air Series entitled, "The Ultimate Science", the content of which was compiled by Professor Brian Hocking of the University of Alberta. His book* proved to be the inspiration for this talk.

Evolution and Time

Geologists have shown us that our planet is about five billion years old. Presumably it had its origin in the condensation of cosmic particles which gave rise to a fiery ball of material which gradually cooled and by a process of change gave rise to Earth as we see it today. By contrast Life has existed on our planet for only two billion years. But it too has been characterized by change. The primitive forms of life gave rise to new more complex forms, and this progression of change has culminated in the diversity of life as we see it at present. New forms of life continuously appeared. These were tested by the environment and if they were well adapted they survived, if not, they became extinct. Despite the teachings of our ancestors that all species were immutable we now know that change, and not immutability is the rule of the Universe.

The continuing process of change, of which I have been speaking, is better known to us all as evolution. Evolution has been the underlying force to all life; its very existence has led to the world as we see it now, and its ceaseless activity will undoubtedly lead to new forms of life in the future. The very essence of the evolutionary process is time. Time, not on an hourly scale, but on the vast geological scale. Without this vast resource of time the world as we know it could never have come into existence.

Plants, Animals, and the Community

It is easy for us to speak of evolutionary change without giving it further thought. However, if we consider the situation we realize that continuous change could have resulted in a hopeless "hodge-podge" of organisms living in chaos. This is not the situation. By and large no organism can go it alone. As a result organisms have developed in close proximity to each other, each having some effect upon the other.

If we extend our view to some natural, undisturbed area, e.g. a National Park, we can exemplify the situation clearly. At a first glance our natural area may appear to have a homogenous appearance. Upon closer examination, however, it will be realized that there are areas which have strikingly different topography. The river valley for example, will differ from the mountain top. These differences will be reflected even further if we examine the plant cover associated with each area. The dwarf plants inhabiting the wind-swept areas above the timberline are different from those inhabiting the rich river valley, or gravelled road shoulder. All too often Man does not detect this, since in his eyes only the harvestable plants are of value, the others are simply ignored.

However, the biologist realizes that each plant has a vital function. That function is photosynthesis; the unique process by which the sun's energy is converted into chemical energy, through the action of chlorophyll and the bonding of carbon dioxide and water. The organic compounds produced form the basis for the carbohydrates, fats, and proteins, upon which all life depends. Without this activity of green plants, animal life as we know it could not exist. Indeed, had it not been for the photosynthetic activity of plants in centuries past, the Industrial Revolution could not have occurred

Presented at meeting of the London Home Economics Association, January 1969.

and the wheels of modern industry would not be turning smoothly at present. As Bentley Glass has said, "Life is a photochemical phenomenon".

Thus far I have only shown the dependence of animal life upon the photosynthetic activity of green plants. However, the converse is also true. Plant life is dependent upon animal life. One of the raw materials for photosynthesis is carbon dioxide. This compound is produced by all living organisms as a result of cellular respiration, the process by which the organism extracts its energy from food. As a result the carbon dioxide fixed by photosynthetic plants is released by other forms of life for further use.

The picture should now start to gel. Plants are dependent upon animals, and animals upon plants. Thus in all areas of our globe complex relationships have developed between plants and animals and other forms of life. Each area is typified by harmonious communities. Within each community we find producers (green plants), consumers (animals), and decomposers (bacteri, fungi). Each organism has a clearly defined role to play, whether it be in the community contained by a rotting log, or in the much larger and more obvious maple-forest community. As Ralph Waldo Emerson once said, "Nature works on a method of all for each and each for all."

One final point must be made. We are now aware of the intricate communities which exist. By close examination we can see them. But what we cannot see is that each community has developed its intricate balance over vast periods of evolutionary time. They did not develop over-night, but they can be bulldozed to oblivion within a moment.

Man the Peculiar Animal

How does Man fit into this scheme of natural communities? Some may argue that he does not need to because he is supreme and is somehow remote from nature. However if we stop to think we will realize that Man is essentially similar to any animal in the fact that he must rely upon the activity of green plants to provide his food. Without them animal life, including human life, would become extinct.

But there is a difference between Man and other animals. Man has a highly developed brain which, in combination with his hands, has given him a control over his environment, whether it be for good or evil. Here lies the unique distinction. Man is indeed a peculiar animal in that he can alter his environment more or less at will. Indeed was this not mankind's God given command? In the first Chapter of Genesis, verse 28, we read, "And God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth."

Man in Nature

With this knowledge let us now look at Man's record. Latest estimates suggest that Man had his origin some 75,000 years ago. This is a mere drop in the ocean compared with the two billion years of cumulative evolution which gave him being. What has he achieved in this time?

At first glance the record seems impressive. Our planet is studded with sparkling cities; our terrain is criss-crossed with super-highways; our skies are streaked with vapour trails; our granaries are filled with stored foods so that we no longer fear the onslaught of changing seasons; much of our industry is automated so that we have more leisure time; and in the near future Man may conquer space. But nothing in this world is free. We have paid a price for our "success".

In the short span of Man's recorded history no fewer than 106 forms of mammal and 127 forms of birds have become extinct, of this total no fewer than 70 forms have died out within the last 50 years, and at the present time it is estimated that some 600 forms of mammals and birds are threatened! Most of these extinctions are attributable to Man's activity. He simply altered the environment—but in such a way that life became impossible for the extinct forms.

In many cases this environmental alteration is obvious. We can observe the clearing of bush, the creation of agricultural land, the draining of swamps, and the continuing urban sprawl as new housing subdivisions are established. But much of the environmental change is not so obvious. Day by day tons of chemical pesticides are applied to our gardens, fields and streams,

in order that we may eat unblemished produce. Day by day tons of carbon monoxide fumes are released from automobiles and aircraft, simply so that we may travel from A to B in as short a time as possible. Day by day raw sewage is poured into our lakes and streams, so that we have the false illusion that we are living in hygienic comfort. And day by day industrial fumes spew from our factory chimneys, so that we may have more and more consumer goods to keep the wheels of industry rolling. Our news media frequently tell of the dangers of pollution, and yet we are content to let things slide. We are not yet threatened directly so why worry if penguins in Antarctica have D.D.T. in their body fat, or if plastics are hard to dispose of because of their biologically inert nature, as long as we have "pure" foods hygienically packaged in clean plastic wrappers. However if we do not start to worry now, will we have time to rectify the situation in the future? We are rapidly changing the environment in which we have to live. Are we going to alter it so drastically that we too, like the extinct forms of life, are going to find life impossible?

On the global scale another problem faces us. At the present time our population stands at about three billion. Given its present rate of increase, it is estimated that by the year 2,000 the world's population will have doubled to six billion. At the same time our food producing ability, insufficient as it stands for our present population, is not even keeping pace. Some may shrug and say, "So what. Science is on our side. We will soon be harvesting the ocean floor and cultivating the deserts." However, we are gradually learning that the energy expenditure to achieve these ends is greater than the gain! Time is running out. What is the answer?

Biology: The Ultimate Science

For too long mankind has lived in a biological vacuum. Our children are born into this vacuum and by and large we live in it until we die. As a result we live in oblivion to other organisms, which culminates in the ludicrous view of ourselves as being in no sense animals but rather little gods. We are omnipotent and the world is at our feet.

Oh yes, we generally recognize that biology, as a science, exists. However its main application, we feel, is in the fields of agriculture and medicine. It is time we changed our thinking. Biological knowledge is useful in a large number of fields but its most important application lies in our daily lives.

However the situation is not likely to change until the whole emphasis in our society is changed. Biology is not a science to be trifled with. It needs mellowing before it is applied. But this fact is often overlooked, or completely ignored. All too often the short-term gain is the only goal. Thus the bulk of financial support for biological research is provided by sources with a vested interest. This support is usually for short terms only, since it is financial profit, and not sound biological fact, that is the aim. However, if we look at the pesticide problem, for example, we realize that no pest species has been eradicated as a result of pesticide application and indeed no biological problem has had a chemical solution. But what has been the long-term effect? We do not know.

Biology needs time to provide its answers. Man must therefore reappraise his situation. We are peculiar animals with an ability to alter our environment and to use our intellect. Why don't we use this ability to learn about biology, to study the natural history of the organisms which surround us? We have lessons to learn. We must think biologically if we are to survive, since biology holds the answer to many of our current problems.

For example we must change our attitude to the organisms which surround us. As I took pains to point out previously, each organism has evolved as part of a community, and thus each has a role to play. Nevertheless when a conflict between Man and some organism arises, that organism must be controlled. Should we not pause and ask the question as to whether we might be at fault? With an understanding of the biology of such pest organisms we could undoubtedly solve the problem in a better way than simply resorting to some instant cure, usually eradication, the long term effects of which we have no knowledge. Is it not a measure of our "success" that those species which we have tried desperately to save have become extinct, while those which we have branded as pests and have attacked ruthlessly remain to pester

us? Man has caused the extinction of more organisms than any other creature. How many has he restored? Is it wise for us to do something which we cannot undo? This applies, not only to the extinction of species, but also to the wanton destruction and modification of our environment, without thought for the future.

We must also solve the problem of increasing human populations. Biological investigations have shown us that when animal populations reach too high a level, psychic stress results, and a complete breakdown of behaviour results. This has had horrendous effects on experimental mammalian populations. There is no evidence to suggest that we as a species should behave differently, under similar conditions, from the experimental animals. Should we not use our intellect and adopt a rational approach to population control before sub-human methods do it for us? Can we not think along sound biological lines?

Finally we must alter our approach to our natural environment. We must learn to live with it and not against it. We have been trying for too long to mould the rest of the natural world to our needs without really understanding the laws which govern it. We need to acquire a better understanding of these laws. We need more give and less take. If we exploit our biological knowledge to its fullest we can indeed gain, "dominion over the fish of the sea, and over the fowl of the air, and over every living thing", but also dominion over Man himself—which the first Chapter of Genesis fails to mention. But we must change our ways soon. Time is running out.

*Hocking, Brian. 1963. The Ultimate Science. C.B.C. Publications, Toronto.

DIRECTION OF HOME ECONOMICS IN CANADA

Continued from page 18

A home economist employed in the business world comes close to meeting the objectives of the profession in that she must apply directly her knowledge and skills to the solution of problems that relate to the family and the community. She must be practical, and must recognize things as they are. She is often the one, however, who tends to lose contact with the university and with her professional association. Is there a changing role for the home economist in business? Perhaps in this case we are not so much involved with a changing role as with an additional role.

In this area of new career identification, home economists in business must assume added responsibilities. Who is in a better position to diagnose areas in the business world where home economists could find new and meaningful employment? This is a duty that the educator cannot carry out without external help. We need the help of those who are already in the business world, and who have the insight and the experience and depth of knowledge to know other employment areas that are presently untapped.

In conclusion, just a word on refresher education. I use the word refresher advisedly because, as is the case of any profession where women predominate, refresher education should be of very real concern. The differentiation should be made at the outset between continuing and refresher education. All professions must recognize the need for continuing education. Research findings, changing social structures, advent of new areas of specialization, all contribute to the need for continuing education. In the case of Home Economics we are faced with re-entry into professional practice of those who have been inactive for periods of two to 20 years. For any person who has been inactive in excess of five years I believe that some form of refresher education is necessary, if the calibre of the name, if the concept of the usefulness of Home Economics is to be maintained.

If this is true, there are several questions which arise immediately. First of all, should refresher education be required of home economists returning to practice? If so, how and by whom would this requirement be enforced? Do we have to put this kind of teeth into the jaw of the professional association? What should be the content and duration of an appropriate refresher course? Who would have the responsibility of presenting it?

I do not have answers to all the questions that I have raised. I raise them because they warrant the combined attention of professional associations, both national and provincial, and the university.

Happenings! . . . Happenings! . . . Happenings!

Direction—69: Left to Right: Miss Sally Henry, President, C.H.E.A.; Dr. Lewis E. Lloyd, University of Manitoba; Miss Ethel de Mings, Ryerson Polytechnical Institute, Toronto.

Direction '69

Direction '69 was a one day conference (February 28) for leaders in Home Economics sponsored by Ryerson Polytechnical Institute under the leadership of Miss Ethel DeMings, Chairman of the Home Economics Department. The morning speaker was Dr. Lewis Lloyd, Dean of Home Economics, University of Manitoba whose topic was "The Direction of Home Economics in Canada." Dr. Janet Wardlaw, Dean of Home Economics, Macdonald Institute, University of Guelph projected the "Direction of Home Economics in Ontario."

Scarves for Moosonee

The Home Economics Club at Ryerson entered the annual Winter Carnival "Scarf Knitting Contest". Club members produced thirty-four feet of multicoloured hand knitted scarf. After winning first prize for the longest scarf, the contestants divided their creation into sections and sent enough scarves to supply the Moosonee Nursery School. Roberta Cooling, Moosonee Nursery teacher and '68 Ryerson grad sent the children's thanks to the club and noted ". . . it is my belief that if one's neck is warm, it's easier to warm the rest of him."

Work Shop—University of Saskatchewan

Work Shop in Rehabilitative Homemaking was held at the University of Saskatchewan from May 26-May 31. It was sponsored by the College of Home Economics, the Department of Rehabilitation Medicine and the Extension Division. The aim was to increase knowledge and skills in home management as related to the problems of the handicapped. Occupational therapists, home economists and homemakers took part in the program.

Heib Career Folder

Available at the National office the French version of the HEIB career folder.

A.H.E.A. Annual Convention

Alberta Home Economics Association held its convention from Thursday, April 10 to Saturday, April 12 at the Macdonald Hotel, Edmonton The theme of the conference was "Mass Media—Servant or Master."

Keynote speaker was Dr. Shirley Weber, head of the department of nutrition, University of Manitoba, and her paper on "Mass Media—Servant or Master" set the stage for the entire convention. She told the 160 home economists she admires the ability of the media to inform, educate and entertain. She doesn't believe the public is frequently manipulated by the media, but did say everyone should rely on his own intelligence to be critical of it.

Because media is recognized as such a powerful force in our lives, she suggested a study of media be introduced to the school curriculum so students could understand the purposes and processes of it.

She also mentioned the consumer for his own sake must accept the responsibility for making positive and constructive suggestions if he sees, hears or reads that which offends his tastes or values.

Group discussions on mass media and the consumer, mass media and the family and mass media and children followed Dr. Weber's address.

Television and Children

Television and its effect on children was emphasized at the convention, however, not all speakers agreed.

Mr. Lyle Larson of the department of sociology, University of Alberta, said if a family unit has good values and standards, television will not have an adverse effect. Mrs. J. B. Feehan, a social worker and mother of seven, said television limits the social interaction of the family. She also mentioned that television can be a good baby sitter but is often over used.

Another social worker and mother, Mrs F. A. Herbert, said television puts added pressures on low income families because it creates needs and wants which previously did not exist.

Mrs. Mary Van Stolk, author of "Man and Woman" (1968) criticized television because she feels it is teaching children to accept violence.

Listing of Ingredients on Food Labels

Consumers will be pleased to know that a new regulation pertaining to the labelling of soups has been passed which will require a complete list of ingredients on soup labels, in descending order of proportion, after January 1st, 1970.

Not only is this information important to people suffering from a food allergy, but consumers have a right to know what ingredients are in the foods they buy.

Tips in Understanding the New Soup Label:

CHICKEN WITH RICE AND VEGETABLES
Chicken broth, rice, chicken, carrots, peas, celery, vegetable oil, salt, monosodium glutamate, wheat starch, seasoning

—Ingredients are listed in descending order of proportion

—Ingredients are listed by their specific name

—*But* certain group names are widely used and are acceptable

a) The terms "vegetable fat" or "vegetable oil" are group names. The products so designated may contain any combination of corn oil, palm oil, olive oil, cottonseed oil, peanut oil, rapeseed oil, sunflower seed oil and soybean oil.

b) "Seasonings" is an acceptable group name for all seasonings other than salt.

c) Any colour permitted by FDD for use in foods may be designated on the label as "colour".

The following flavor enhancers may be used in soups and their presence will be indicated on the label:

a) Monosodium glutamate: used to intensify the meaty flavour of soups.
b) Hydrolyzed vegetable proteins: partially broken down proteins obtained from various sources: wheat, rye, soya, corn, etc. . . .
c) Hydrolyzed milk proteins: product obtained from the milk protein casein.

Special Caution to Those Who May Suffer from Food Allergy

—Read carefully the list of ingredients.
—If an allergic reaction is suspected to one of the ingredients declared under the general name of—"vegetable oil", hydrolyzed vegetable protein" or "seasonings"—the safest thing to do is to avoid this particular food.
—If there is no list of ingredients on the label of a food, write to the manufacturer, who, in many cases, will be pleased to provide the desired information.
—In the case of *doubt: abstain.*
—From Consumer Memo issued by the Department of National Health & Welfare, Ottawa.

Is It Really a Bargain?

Misleading price advertising often separates a consumer from his money by leading him to believe the price he is paying is better than it really is. Fortunately, we are protected by the Combines Investigation Act. Section 33C is designed to protect consumers who are not likely to know prevailing retail or list prices. It states clearly that anyone who promotes the sale of an item by misleading consumers about the prices at which the items are ordinarily sold, is breaking the law. This section of the Act has teeth in it—offenders can be fined and prohibited from repeating the practice. There are actual cases, such as a jewellery manufacturer and a children's clothing store, both of whom felt the bite of the law when they were convicted and fined. More and more court cases are conducted each year. From April 1968 to early March 1969, 16 alleged offenders faced the court.

To augment Section 33C, the Department of Consumer and Corporate Affairs has a staff of highly-trained investigators experienced in handling complaints, collecting evidence and keeping an eagle eye on advertisements to detect deceptive pricing. Consumers and the trade help too. Generally, some 20% of cases that have arisen come from consumers; some 30% of complaints come from the trade—especially competitors who keep a suspicious eye on each other.

What kinds of price misrepresentation are brought to light? Some offenders get into trouble by using such terms as "lists at", "regularly at", "retails at", "compare at", quoting higher prices than the prevailing ones. The so-called "regular price", for example, must be the ordinary price charged by dealers in the district. A British Columbia firm, the B.C. Collateral Loan Brokers, Ltd., advertised a shotgun at "regularly $69", but when investigation showed that $69 was substantially higher than the usual price, the firm was convicted and given a suspended sentence. When two Ottawa furniture dealers, R. & A Cohen, Ltd. and J. L. Orme & Sons, Ltd., advertised comparative prices for stereo-radio phonographs in 1965, based on the manufacturer's 1963 suggested price, which had since been lowered, they were fined.

Some "cents-off" labellings offer genuine bargains, but in some cases these specials are of such duration, they become regular prices. In others, the price may fluctuate, yet the product still bears the "cents-off" label. A brand of coffee, Mother Parker's Instant, bearing the label "30 cents off regular price" was displayed for seven months, but the prices fluctuated from $1.55 to $1.59. Again, the company was fined and prohibited from repeating the offence.

If you think you have found a real bargain, stop long enough to compare prices in other stores. Sometimes you will get a good buy. Sometimes you won't. If you have already made the purchase and feel that you have been misled, you should contact the Director of Investigation and Research, Combines Investigation Act, Department of Consumer and Corporate Affairs, Ottawa. Describe the article in detail; state the "sale" and "regular" prices quoted on the label or in the advertisement; how and when it was advertised and by whom, and your reasons for believing the price

was misleading. You should also send the price label or advertisement, but keep the bill carefully in case it is needed later as evidence.

The Minister of Consumer and Corpo ate Affairs, the Honourable Ron Basford, said recently: "The Canadian consumer demands honesty in the marketplace. Our society has rejected the old concept of 'caveat emptor'—let the buyer beware—in favour of—*let the seller take care*".

—Excerpts from Consumer Communique issued by the Department of Consumer and Corporate Affairs.

American Gas Association's Home Service Work Shop

In March, over 300 Home Economists attended the American GAS Association's Home Service Workshop in Pittsburgh. The theme of the convention was SMACK—"Selling, Marketing and Communicating Know-How".

The overall tone of the Workshop was the upgrading of Home Service and the importance of making Home Service an integral part of the marketing team.

Educators spoke on the changing trends in Home Economics courses across the country to meet the needs of industry. Manufacturers brought the latest information on all GAS appliances.

Magazine people reported on their consumers and what they expect from utilities and appliance manufacturers.

The highlight of the Convention was a talk entitled "How do You Rate in the Executive Suite" by D. Hart, Managing Director of AGA. Mr. Hart accused women in business, home economists, etc. of being too emotional, resistant to change and overly concerned with status or security. We were also blamed for not communicating sufficiently with management and the marketing team, resulting often in less than effective programmes.

This brings self-analysis—"How do *you* rate in the Executive Suite?"

Annual Meeting of Alberta Home Economics Association

The 30th annual meeting of the Alberta association was held during the convention.

One of the resolutions was the investigation into the establishment of a permanent secretary. Continuing projects of the association include the compiling of an Alberta Home Economics Directory and a structural study of AHEA and its relation to the local associations.

An annual $150.00 scholarship to be awarded in the fall to a student entering second year Home Economics at the University of Alberta was announced at the annual meeting. The association hopes to reach a scholarship goal of $350.00.

Outgoing president of the AHEA is Dr. Elizabeth Empey, University of Alberta, Edmonton, and incoming president is Mrs. A. J. Zorn of Calgary. Convention chairman was Dr. Edith Downs, University of Alberta.

Awards

Miss Barbara Anne Stonehocker, Lacombe, Alberta, a 1969 graduating student in the School of Household Economics, University of Alberta, Edmonton, Alberta, has been awarded the Henry A. Jastro Fellowship by the University of California, Davis, California.

This Fellowship is for the academic year 1969-70; the field of study is Textile Science.

The value of the Fellowship is $2,400 plus the $1,200 non-resident tuition.

Comparisons

The American Home Economics Association is the national organization of some 45,000 individuals in home economics including 12,000 college students and 33,000 professional home economists—all college graduates—who are engaged in teaching, business, homemaking, research, health and welfare, extension, institution administration, international service, journalism and other areas of specialization.

AHEA was founded in 1909 to improve the quality and standards of individual and family life through education, research, cooperative programs, and public information.

The Canadian Home Economics is our national organization of some 1,237 members and was founded in 1939. There are 3,543 students registered in Home Economics courses in Canadian Universities 1968-1969.

From the National Executive

Brief to Commission on Relations between Universities and Governments.

A brief from the Canadian Home Economics Association was presented to the Commission on the Relations Between Universities and Governments on April 1, 1969 in Toronto. Jean Sabry, Betty Upton and Sally Henry represented the Association.

Brief to Senate Special Committee on Science Policy.

This brief has been accepted by the executive. It is in both English and French and has been sent to Ottawa.

Career Film

The executive agreed to assist with the making of a film dealing with careers in Home Economics. Miss May Maskow of the Ryerson Polytechnical Institute is producing it.

The filming commenced in May and the film should be available in July or August.

Circle These Dates

Fifth International Congress on Dietetics: This Conference will be held in Washington, D.C., on *September 8-September 12.* The fee is $30.00 (U.S. Funds) payable to the American Dietetic Association. Their address is: 620 N. Michigan Ave., Chicago, Illinois 60611, U.S.A.

Program Highlights: Theme: Dietetics in a Changing World. International speakers throughout the week will discuss this theme and all its implications in major and minor sessions. "The Changing World" in relation to food, population, and health will be the Opening Session of the Congress. An internationally renowned speaker will keynote the Congress on Monday, September 8, 10:00 a.m. to 12 noon, by presenting his view on this most timely topic.

A Few of the Sessions and Speakers for the Week are:

Social Aspects of a Changing World: Miss Jean Steckle (Italy).

Comparison of International Recommended Dietary Allowances: Representatives from Canada, Japan, Russia, Scandinavian countries (Arvid Wretlind, M.D., Sweden), and U.S.A. (W. H. Sebrell, Jr., M.D.).

Potential Toxic Additives to Food: Leon Goldberg, D.Sc., D.Phil. (U.S.A.).

Exposure of the World's Food Misconceptions: E. Neige Todhunter, Ph.D. (U.S.A.).

Food in a Changing World: Mr. R. J. Johnson (U.K.).

Potential Public Health Problems or Hazards: Hilliard Pivnick, Ph.D. (Canada).

Nutritional Changes vs. Changes in Production Method: Miss D. F. Hollingsworth (U.K.).

Nutritional Problems Related to Urbanization: D. B. Jelliffe, M.D. (Jamaica).

In addition to these major sessions held throughout the week, Monday, September 8, 1969, and Thursday, September 11, from 3:00 p.m. to 5:00 p.m., several simultaneous small sessions are planned. Presentations of original research and findings from studies conducted the world over will be given.

November 13-November 16, 1969: College Club Conference—Mount Allison University, Sackville, N.B.

October 23, 24 and 25, 1969: New Brunswick Home Economics Association Annual Convention is to be held in Newcastle.

October 16, 17, 18, 1969: Nova Scotia Home Economics Convention and Annual Meeting at Dartmouth. The theme is "Do I Speak Your Language".

July 6-10, 1970: CDA and C.H.E.A.—Joint Convention at the King Edward Hotel, Toronto, Ontario.

A SINCERE WELCOME . . .

To our new member who joined C.H.E.A. in February 1969:

Saskatchewan

Sister M Philomena Dobmeier, Box 10, St. Elizabeth's Hospital, Humboldt, Sask. —Dietitian and Home Economics Teacher.

One of the most important civil rights is the right to live unmolested in the enjoyment of life.

CANADIAN HOME ECONOMICS ASSOCIATION

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205 Fort Howe Apts.,
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Textiles and Clothing:
Miss Jean McLarty,
3520 Enniskillen Circle,
Box 143,
Cooksville, Ontario.

Recommended for Canadian Home Economics Classes

ADOLESCENTS IN SOCIETY: Selected Sources in Personal and Social Relationships, Anne McCreary Juhasz, Loyola University, Chicago, and George Szasz, M.D., U.B.C. (Curriculum Resource Books Series) **$1.45**

THE FAMILY LIFE CYCLE, Selected Sources, Phyllis Meiklejohn, College of Education, Toronto (Curriculum Resource Books Series) Tentative **$1.75**

NUTRITION FOR TODAY, Third and revised edition, 1968, Elizabeth Chant Robertson, M.D., Ph.D., Hospital for Sick Children and University of Toronto **$4.25**

FOOD FOR MODERN LIVING, Irene E. McDermott, Mabel B. Trilling, and Florence W. Nicholas. Canadian Consultants: Phyllis Meiklejohn, Ontario College of Education **$8.15**

teacher's manual **$1.25**

CLOTHING: A COMPREHENSIVE STUDY, Hazel Thompson Craig, formerly of Gallaudet College, Washington **$7.80**

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